318

610.5 C16
28

Library
of the
Academy of Medicine,
Toronto.
318

CARSWELL CO., Limit
Bookbinders,
PRINTERS,
LAW BOOKS,
PUBLISHERS, etc.
TORONT
ONT.

THE

CANADA LANCET,

A MONTHLY JOURNAL

OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

EDITED BY

J. L. DAVISON, B.A., M.D, C.M., M.R.C.S., E.
GEORGE PERRY SYLVESTER, M.D.

VOL. XXVIII.

LIBRARY
OCT 1 1 2002
UNIVERSITY OF TORONTO

TORONTO:
THE HUNTER, ROSE CO., LTD., PRINTERS.
1896.

LIST OF CONTRIBUTORS TO VOL. XXVIII.

Hutchinson, Woods, A.M., M.D,, Des Moines, Iowa.
Fraser, Donald B., M.D., Stratford, Ont.
Stinson, J. Coplin, M.D., Hamilton, Ont.
Fenwick, K. N., M.D., Kingston, Ont.
Smith, A. Laphorn, B.A., M.D., Montreal, Que.
Rennie, Ed. S., M.D., C.M., L.R.C.S.E., L.R.C.P., Lond., Hamilton, Ont
Shuttleworth, Prof. E. B., Toronto.
Meyers, W. Campbell, M.D., Toronto.
Connor, Leartus, A.M., M.D., Detroit, Mich.
Wilson, W. J., M.D., Toronto.
Mayberry, Chas. B., A.M., M.D., Danville, P Q.
Mitchell, J. C., M.D., C,M , Enniskillen, Ont.
Leffman, Henry, A.M., M.D., Philadelphia.
McKenzie, B. E., B A., M.D., Toronto.
Bingham, George A., M.D., Toronto.
Osler, Wm., M.D., Baltimore, U.S.
Grosvenor, W. J., A.M., M.D., Buffalo, N.Y.
Goldsmith, P. D., M.D., Belleville, Ont.
Clark, J. G., M.D., Baltimore, U.S.
Carstens, I. H., Detroit, Mich.
Chappell, Walter F., M.D., New York.
Gibson, W. J., M.A., M.D., Belleville, Ont.

INDEX TO VOL. XXVIII.

PAGE.

Absorption by the Rectum Posnea..... 24
An Overcrowded Profession..... 29
Asylum Districts..... 30
Abscess of Lung Treated by Drainage and Iodoform..... 31
An Original Doctor..... 32
Appendicitis, Rheumatism as a Cause of.. 43
Anæmic Patients who have Malarial Cachexia..... 70
Aortic Aneurisms..... 82, 118
Acne of the Face..... 104
Abdomen, Why opened in the Middle Line 156
Alcoholism in France..... 167
Acne Rosacea..... 170
Alumnol as a hæmostatic..... 171
Ammonal in Obstructive Dysmenorrhœa... 173
Abdominal and Pelvic Surgery, by A. Lapthorn Smith, B.A., M.D., M.R.C.S., England. Montreal..... 175
Acne of the Face, Massage in the Treatment of..... 196
Appendix, Adhesion of the, to the Pelvic Organs..... 199
Abortion, Doubtful Points in the Management of..... 209
Anæsthesia, Local..... 214
Appendicitis and Rheumatism..... 234
Acne Rosacea..... 235
Alcoholic Neuritis in old age..... 237
Abdominal Hysterectomy, Total..... 245
Abortion, Criminal..... 253
Amputations..... 266
Aneurism..... 266
Appendicitis, Notes on 100 Consecutive Cases..... 268
Asbestos as a Surgical Dressing..... 269
Artificial Serum..... 275
Albuminuria Consecutive to Chloroform Inhalation..... 287
America, A Caricature of..... 294
Abdominal Surgery, The Explanatory Incision in; Its Indications and Technique, by J. H. Carstens, M.D., Detroit..... 345
Amputate, How to..... 350
Albuminuria during Pregnancy..... 358
Acromegaly..... 359
Antiseptic Douches after Labor..... 362
Asthma..... 377
Asthma, Bronchitic..... 377
Antrum, Empyema of the..... 390
Abdominal Drainage..... 391
Appendicitis..... 397
Accident Neuroses..... 417
Alcoholic Inebriates, What shall we do with, by J. W. Grosvenor, A.M., M. D., Buffalo, N.Y..... 304
Appendicitis..... 397

Brain, The Criminal..... 157
Breast, The Hysterical..... 160
Bronchitis, Acute, treatment of, of infancy 238

PAGE.

Bible as a carrier of infection..... 239
Blood, The Extravasation of in Tubal Pregnancy..... 243
Bleeding from Varicose Veins of the Vagina and Vulva..... 244
Breast, Carcinoma of the..... 264
Barber's Itch..... 273
Burns, How to allay the pains of..... 277
Blennorrhagic Vaginitis..... 290
Blood and its Haemoglobin percentage.... 294
Brethren beware..... 296
Beards and Bacteria..... 368
Bicycle, Harmful effects of, upon the girl's Pelvis..... 410
Broncho-pnumonia, by P. D. Goldsmith, M.D., Belleville, Ont..... 299
Bladder, rupture of..... 312
Bicycle, harmful effects of..... 410
Bicycle for Women..... 498

Cardiac Therapy..... 460
Cholera Infantum..... 464
Cerebral Hyperaemia from Want of Sleep.. 477
Cocaine Habit..... 499
Cocaine, the use of, to prevent Respiratory Disturbances during chloroformization. 22
Catarrh..... 22
Chloral, Externally..... 32
Cerebral Hæmorrhage, Prognosis of..... 33
Chloroform, Anesthesia..... 49
Cancer, The new Specific for..... 50
Canadian Medical Association..... 56
Chancroids, Acetanilid in..... 69
Cocaine, Recovery from a large dose of..... 69
Circumcision..... 95
Commencement days..... 105
Chloroform, Deaths under..... 126
Color blindness..... 128
Chordee..... 139
Criminal family, cost of..... 159
Chronic Coffee Intoxication..... 161
Crystitis, Treatment of..... 161, 168
Cigarette Habit..... 165
Constipation in infants..... 172
Coryza, Acute..... 173
Calomel as a substitute for Iodoform..... 196
Carotid Aneurysm..... 196
Carcinoma Uteri, the anatomy of..... 204
Chloroform Poisoning, Venesection in..... 212
Cough, How to treat a..... 212
Constipation..... 215
Cancer, Treatment of, by Serotherapy..... 215
Club-foot, by B. E. McKenzie, B A., M.D., Toronto..... 217
Cancer..... 231
Coccyodynia, Removal of the Coccyx..... 233
Croton Bug..... 237
Cancer of the Breast, Surgical treatment of 243
Catarrh, Chronic Dry Nasal..... 248
Croup, Spasmodic..... 254
Chlorosis..... 256

PAGE.

Castration, Nervous Symptons after..... 256
Cœliotomy, with and without drainage..... 265
Childbirths, certain conditions immediately following..... 279
Cholecystenterostomy by means of the Murphy Button..... 283
Cystitis, Sub-Acute and Chronic, treated by the Vesical Balloon, by J. G. Clark, M.D., The John Hopkins Hospital.... 339
Cholagogues..... 372
Chills..... 377
College of Physicians and Surgeons of Ontario, The Council Examinations..... 378
Cancer..... 398
Cystitis..... 398
Cerebral Lesions..... 399
Cystitis, Acute..... 241
Cancer, objects of operation for..... 308
Curette in gonorrhœa..... 313
Canadian Medical Association..... 335
Cancer, a local disease..... 398
Cerebral Lesions, diagnosis of..... 399
Causes of Mental Impairment in Children.. 443

Diphtheria, some Clinical Points in..... 28
Disinfection of Tubercle-Infected Houses.. 33
Diphtheria Question, The present status of the..... 38
Diabetes Mellitus..... 52
Delivery Stool..... 56
Diphtheria, Laboratory notes on the Bacteriology, by E. B. Shuttleworth, Phar. D., F.C.S., Toronto..... 76
Déjérine at the Saltpêtrière, by W. Campbell Meyers, M.D., Toronto..... 81
Dust..... 89
Doctor's Wives and Professional Confidence 95
Diarrhoea, Morning..... 102
Diabetes, Treatment of..... 103
Diabetes, A Test for Incipient..... 105
Drifting, Who, How, Wither, by Leartus Connor, A.M., M.D., Detroit, Mich.. 107
Diphtheria, by W. J. Wilson, M.D., Toronto..... 111
Diabetes, Diet is Vital in..... 172
Diphtheritic Angina, The Herpetic form of 206
Diarrhoea, Treatment of..... 214
Delirium after Gynaecological operations... 243
Diphtheria-Bacillus, Preference of, for the Tonsil..... 249
Diphtheria, Intubation in..... 276
Death, Cause of Prominent Persons'..... 355
Deciduoma Malignum..... 362
Delivery, Death during..... 276
Dystocia from Ventrofixation..... 414
Deciduoma Malignum..... 421
Drunkards in Austria..... 295
Drainage, Abdominal..... 391
Dystocia from hentro-fixation..... 414
Deciduoma Malignum..... 421

Economics of Prostitution, by Woods Hutchinson, A. M., M. D., Des Moines, Iowa..... 1
Electrical Treatment of Fibroids, the present Status of the, by A. Lapthorn Smith, B.A., M.D., Montreal..... 37
Ear, in the, Exanathemata..... 49
Evolution, Relics of..... 54
Enemata of White of Eggs..... 55
Exposure from Cold, Death from..... 24
Electricity, Death from..... 64

PAGE.

Erysipelas, Vaseline in..... 70
Eczema, Chronic..... 173
Expert testimony..... 181
Epilepsy, a clinical note in the Treatment of..... 193
Eclampsia..... 197
Errors in Diagnosis..... 213
Ethmoid Disease..... 250
Epidiymitis, Treatment of..... 269
Endothehoma of the Fissue of Rolando.... 284
Endocarditis Gonorrheal..... 420

Fracture of the Femur from Muscular Action..... 23
Fillet in Breech Labors..... 54
Flatulence, In the Treatment of..... 88
Faith Healing..... 137
Fistula in Ano..... 139
Falling out of Hair..... 160
Foreign Bodies in the Œsophagus..... 205
Fenwick, The late Kenneth M., M.D..... 211
Frost Bites..... 266
Furunculosis..... 266
Foot, Sprains of..... 269
Formaline Gelatine, A new mode of Antiseptic Treatment..... 367
Fibroids..... 412
Foods, Remedial..... 336

Gonorrhœa, Uncured..... 15
Genital Lesions of Childbirth, The Primary Repair of, by K. N. Fenwick, M.D., Kingston, Ont..... 35
Gonorrhœa, Irrigations in Acute..... 66
" 69, 168
Goitre, Remarks on work..... 122
Guaiacol in Orchitis..... 130
Gastritis of Drinkers..... 172
Good Journals Repay..... 173
Glandular Tuberculosis..... 194
Grief..... 238
Good Example..... 282
Glycosuria, a Product of the Nervous Tension of Civilization..... 377
Gonorrheal Endocarditis..... 420
Gummula of Heart..... 322

Hæmorrhage after Tonsil Operations..... 19
Hysteria..... 45, 158, 202
Hot Water and Habiliments, a Hygienic Homily..... 46
Heart Disease in Masturbators..... 55
Heart Disease, The best treatment in..... 68
Hysteric Simulation..... 94
Hæmorrhoids..... 96
Hydrocephalus, Treatment of Chronic..... 129
Hysteria and Degeneracy..... 138
Headaches of Extra Cranial Origin..... 161
Herpes Zoster, Nerve Lesions in..... 162
" " In the Treatment of..... 171
Heart Disease and Pregnancy..... 190
Hysteria, The Symptoms of Simulating various Visceral affections..... 200
Hands, Disinfection of the..... 204
Hydrocephalus, Chronic Diagnosis of..... 255
" Chronic Treatment of..... 268
Hiccough, Foetal..... 277
Hysteria, Self Injury in..... 285
Hæmorrhoids, Treatment of..... 296
Hydatidiform Mole and Malignant Deciduoma..... 349
How to Sterilize Cotton..... 398

PAGE.

Hæmorrhoids.....314, 396
Hysterectomy, Abdominal..... 413
Hare-lip, Operation for..... 310
Hernia, Radical Cure of..... 313
Hæmorrhoids, Conservative Treatment of. 396
Hysterectomy, Abdominal..... 413

Iodine..... 124
Incontinence of Urine..... 139
Iodide of Potassium..... 139
Insanity, A Criticism of Present Methods of Treatment, by Chas. B. Mayberry, A.M., M.D., Danville, Pa..... 141
Intestinal Obstruction..... 254
Idiocy, Consanguinity of Parents in relation to..... 158
Itching, Cannabis Indica for..... 173
Intestinal Anastomosis, Technics of Mounsell's Method of..... 185
Idiot Skulls..... 196
Infantile Convulsions, The Rational Therapeutics of..... 201
Influenza, Effect of, on the Female Sexual Organs..... 204
Intra-Laryngeal Injections in some Diseases of the Larynx and Bronchi..... 241
Insanity, Uses of Electricity in the Treatment of..... 246
Immunity from Antitoxine..... 249
" in Animals..... 367
Influenza..... 329
Inertic Uterine..... 337
Infection, Prevention of..... 415

Joint Disease, Iodoform Injections in..... 55
Jameson, Dr..... 295

Kidney, A new Method for Anchoring..... 20
" Movable, Thirty Cases Treated by Operation..... 70
Knee, Jerk in Diagnosis..... 192
Keresone, Surgical Uses..... 215
Knee-Joint, Two cases of Movable Body in the, by Geo. A. Bingham, M.B., Toronto..... 259
Kidney, Influence of Ether and Chloroform upon the..... 295

Laryngeal Tubercle..... 48
Lightning Stroke..... 51
Leeches, Application of..... 69
Lodge Practice.....100, 135
Lay Press as Advertising Mediums..... 104
Labor, The Walscher Position for..... 159
Larynx, Tuberculosis of..... 241
Labor, Complications of, Occasioned by Operations for the Fixation of the Uterus..... 242
London Medical Association..... 254
Liver, Pylephelebitis and Abscess of the ... 286

Medical Notes.....18, 70, 157
Medical Profession. Prof. Bronardel on the 21
Mercury in Meningitis..... 24
Microbes, Toxins and Immunity..... 44
Myopes, Some "Dont's" for..... 68
Mania, Acute..... 68
Medical Study, The Reform of..... 93
Medicine, Matriculation in, in Ontario...99, 133
Massage in Sprains, Bruises and Dislocations 104
Moral Degeneration..... 134
Malignant Disease, The Serum Treatment.. 136

PAGE.

Meningitis, a constant sign of commencing. 160
Medical Banquets, The Annual..... 167
Melancholia Cured by Intra-nasal Operation..... 169
Milk, Borax as an aid to the Digestion of.. 170
Mammae, Cystic Degeneration of the..... 199
Measels, The Micro-Organism of..... 239
Medieval Gynaecology..... 244
Myoma of the Uterus..... 245
Multiple Neuritis following Pregnancy, Paralysis of the four extremities, cure.... 246
Magazine Influence..... 269
Medical Libraries..... 270
Musser..... 276
Medical Men to Avoid..... 290
Mind, The Influence of..... 294
Milk, boiled or unboiled..... 284
Medical Malpractice..... 373
Mosquitoes and Malaria..... 320
Matriculation Council..... 333
Medical Session, Length of..... 334
Medical Association, Ontario.....334, 427, 428
Malignant Growths, Inoperable..... 397
Myoma Uterine..... 414
Medical Council, Ontario..... 425
McFarlane, Dr. Laughlin..... 291

Nocturnal Enuresis, Treatment of..... 53
Nasal Tablet, A new..... 65
Nasal Epilepsy..... 138
Nephritis, Pilocarpine in..... 160
Neuralgia..... 172
Nose and Throat, Treatment of during Measles and Scarlet Fever.....236, 377
Nasal and Past Nasal Catarrh..... 240
Neurasthenia, Imperative Conceptions..... 248
Neuralgia, Intercostal..... 248
Nitrate Silver..... 256
Necropsy..... 287
Note to Contributors..... 297
Neurasthenia, Some Common Forms of, their Treatment..... 364
Nose and Throat, Modern Methods of Treating Diseases of..... 369
Night Sweats, Hydrastis Canadensis for... 377
Neurasthenia, Dietetics in..... 416
Nephritis, Sulol in..... 376
Neurasthenia, Common Forms of..... 327
" Diet in..... 416
Nitro-Glycerin in the Treatment of Sciatica 479

Operation, On the Management of Cases during the period immediately following..... 229
Otorrhoea..... 256
Obstetrical Superstitions..... 360
Ontario Medical Council..... 425
" " Association..... 427
Observations on Antiseptic Therapy, by Dr. McCullough, B.A., M.D., Erin, Ont.. 449

Prevention of Diseases among infants..... 14
Presence of Mind..... 20
Pyloric Mucus Membrance, Removal of a piece of..... 24
Physiological Teaching..... 53
Pean, M., The Triumph of..... 55
Piperazin in Uric Acid Diathesis..... 69
Permanganate Stains..... 96
Pasteur, Louis..... 101
Papain in Chronic Gastric Ulcer..... 127
Peritoneal Tuberculosis, Surgical aspects of 150

PAGE.

Prostatic Hypertrophy, Excision of the Vas Deferens for ... 160
Piles, the treatment of ... 168
Physicians of the U. S., their number ... 173
Purulent Ophthalmia ... 173
Phthisis, a case of, apparently cured by N. A. Powell, M.D., Toronto ... 191
Puerperal Tetanus treated by Tizzonis Antitoxin ... 204
Pharmacal "Ethics," a test in ... 211
Pregnancy, Diet in ... 212
Posture in Anæsthesia, The debate on a ... 212
Pruritus of the Scrotum ... 214
Puerperal Infection, Delayed ... 244
Puerperal Eclampsia ... 244
Pleurisy Gonorrhœae ... 250
Paralysis, Facial ... 266
Phythisis, Mixed infection in ... 278
Perinterine Hermatocile, operative interference in ... 283
Pathogenesis of Uraemia ... 287
Paralysis, Facial, predisposing causes in ... 359
Puerperal Fever, the nature of ... 371
Picric Acid for Burns ... 376
Patella, fracture of ... 353
Peritonitis, Pathogenesis of ... 368
Pregnancy, Extra-Uterine, by W. J. Gibson, M.A., M.D., Belleville, ... 388
Patellar Reflex ... 419
Prostate, Hypertrophy of ... 124
Pus in Joints ... 313
Pericordial Effusions, ... 315
Prolapsus of cord, posture in ... 323
Pan Hysterectomy ... 325
Pregnancy, Extra-Uterine, by W. J. Gibson, M.A., M.D., Belleville ... 388
Potts' Disease ... 398
Patellar Reflex ... 419

Quinine Tree ... 105
Queen's University ... 375

Rupturing the Amniotic Sac in Labor ... 24
Render the Intestinal Canal Antiseptic ... 33
Rocking Chair, The ... 68
Rhachitis, A Theory of ... 160
Rhinological Don'ts ... 240
Relations Existing between the Sexual Apparatus of the Female and Affections of the Larynx ... 241
Roentgen's X Rays ... 251
Rheumatism, Acute Articular ... 252
Rest in Cardic Affections ... 255
Rae, Dr., The late ... 375

Sterilization and Storage of Catgut ... 11
Self Poisoning by Chloroform ... 23
Sulfonal Poisoning in a Dipsomaniac ... 23
Seasonable Skin Diseases ... 27
Sugar, Testing for ... 32
Sulphonal and Trional Compared ... 47
Starchy Food, The Digestion of, in Infants 51
Suspensio Uteri, The Proper Method of Performing it, and its Results ... 53
Syphilis, Legal Control of ... 56
Stomach, A Pistol Shot, Wounding, by G. S. Rennie, M.D., L.R.C.S.E., L.R.C.P.L., Hamilton, Ont ... 73
Sterility ... 91
Strychnine in Nervous Cough ... 104
Salicylic Acid Ointment ... 105
Serumtherapy ... 128

PAGE.

St. John Ambulance Association ... 139
Strychnine, The Value of, in Opium Poisoning ... 155
Silver Nitrate, Therapeutic Value of ... 162
Sleep for Children ... 162
Sciatica, Nitro-Glycerine in ... 169, 417
Specialism Run Mad ... 171
Strontium Carbonate as a Dentifrice ... 171
Sex, Determination of ... 172
Sordes, Solvent for ... 172
Suppurative Peritonitis Operations in General ... 202
Surgical Shock as Cause of Death in Women 202
Septic Infection, Intoxication and Pyæmia. 210
Syphilis, Antitoxin Treatment of ... 234
Story of a Woman who makes her Doctor her Confidant ... 236
Smallpox, Treatment of ... 238
Symphyseotomy ... 245
Surgical Hints ... 267
Strychnine in Pregnancy ... 296
Syphilitic Spinal Disease ... 356
Styptic, A new ... 377
Septic Absorption in Operation ... 349
Surgical Morals ... 395
Suspensio Uteri ... 413
Septic Infection ... 415
Sleep ... 419
Surgical Morals ... 312
" Items ... 314
Sympysiolomy ... 326
Serum, Anti Typhoid ... 330
Suspensio Uteri ... 413
Sciatica, Nitro-Glycerin in ... 417
Sleep ... 419
Sudden Deaths in the Puerperium, with Report of Case ... 472
Surgical Treatment of Intracranial Tumors 452

Tubercular Meningitis and Cerebro-spinal Meningitis contrasted ... 12
Tapeworm, Successful Treatment of ... 56, 169
Toronto Clinical Society ... 101
Trinity Medical Society ... 102, 253, 285
Thirst after Celiotomy ... 137
Traumatic Septicaemia, by J. C. Mitchell, M.D., C.M., Enniskillen, Ont ... 148
Tendon Grafting ... 169
Tuberculosis of the Tonsils ... 171
Tattoo Marks ... 172
Teeth, To dissolve Tartary of the ... 173
Tonsils, Enlarged, A Safe and Sure Method of Reducing, by H. W. Kendall, M.D. 190
Tumors, Malignant, The Therapeutic value of Toxins in ... 203
Trismus and Tetanus Neonatorum, A Case of ... 204
Throat and Nose, Diagnosis and Treatment of Disease of ... 205
Therapeutic Notes ... 206
Tubercle Bacilli, The Test for ... 213
Thyroid Gland and Female Organs of Generation ... 235
Traumatic Neurasthenia ... 248
Typhoid Fever, Five Years Experience with the Cold Bath treatment of, by William Osler, M.D., Baltimore ... 261
Tumors ... 266, 278
Tuberculosis, Treatment of, in Children with Iodoform Injections ... 266
Tumor, Villons of the Rectum ... 269
Traumatic Neurosis ... 285

PAGE.
Tubercular Endocarditis. 287
Throats, Common Sore..... 288
Tonsil, Two Case of Cancer of the..... 289
Thyroid Gland, A Case of Tuberculosis of the..... 290
Tuberculin..... 292
Tuberculosis of the Soft Palate..... 359
Thyreoid Extract in the treatment of Myxedema..... 375
Tape Worm..... 376
Tumors, Malignant..... 397
Tetanus..... 415
Talipes, Vorus.. 311
Tuberculosis, Surgical..... 313
Throat, Modern Methods in 331
Trinity Alumini..... 335
Teaching Modern Obstetric..... 415
Tetanus following Abortion..... 415
Tubercular Peritonitis..... 456
Treatment of Cancer of Rectum..... 457
Treatment of Burns..... 458
Treatment of Pelvic Suppuration by Abdominal Section..... 468

Uterus, perforated..... 54
Uterus, Curetting the, in cases of Puerperal Septicæmia..... 93
Urine, incontinence of, in a child..... 96
Urticaria..... 96
Uterus, When and How to Curette the.... 115
Uterus, Malignant disease of the..... 166
Urethra, Dilatation of..... 266
Ulcers of the leg..... 267
Uterus in Ectopic Gestation..... 278
Ulcerative Endocarditus, due to the Genococcus..... 286
Uterus, Surgical treatment of Retrodeviation of the..... 292

PAGE.
Urethpa, Complicated by Old Strictures, Chronic Inflamation of the..... 349
Uterus, Rupture of the, with recovery..... 362
Urine, to preserve the..... 368
Upper Air Passages, Clinical notes on new remedies and treatment of, by W. T. Chappell, M.D., M.R.C.S., England, New York..... 380
Uterus, Ventic, Suspension of the..... 411
Urethra, Stricture of..... 312
Upper Air Passages, Clinical notes on treatment of, by Walter F. Chappell, M.D. New York..... 379

Vaginal Douches, How sometimes cause severe accidents, by Donald B. Fraser, M.B., M.R C.S., Eng., Stratford, Ont. 10
Varicose Veins and Ulcers..... 64
Vesicovaginal Fistula..... 199
Vaginal Hysterectomy with clamps..... 199
Vasomotor Œdema without albuminuria.. 203
Varicose Veins, operation of..... 213
Vetapathy..... 257
Vomiting, The use of Vinegar to prevent, after Chloroform Inhalation..... 293
Vasia Deferentia, Ligation of..... 268
Veutro, Suspension of Utreus 411

Whooping-Cough, Open-Air Treatment of.. 22
" " The use of Promoform in the Treatment of... 50
Waterlogging from Anæsthetics..... 96
Worms, Seat..... 105
Waterloo and Wellington Medical Association..... 139
Wisdom Teeth and the Tonsils..... 278
When shall we Trephine..... 352
Walcher Position during Parturition..... 361

THE CANADA LANCET,

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

The LANCET has the Largest Circulation of any Medical Journal in Canada.

Original Communications.

THE ECONOMICS OF PROSTITUTION.*

BY WOODS HUTCHINSON, A.M., M.D., DES MOINES, IOWA.

Reproduction is heaven's first law. The first commandment in Genesis is "be fruitful and multiply," and is of more importance than all the other ten put together. It is also much easier to keep. It has always been pretty generally observed without much assistance from Church or State; indeed in spite of a good deal of opposition from both at times. The attitude of so-called "morality" and religion toward this magnificent impulse is characteristic. The burden of their childish song is "Thou shalt not." They have much to say in reprobation, but very little in approval of a process, whose dignity and beauty they are utterly incapable of appreciating, and whose magnificent perfection they haven't the brains to comprehend.

Because, forsooth, it is a hard thing to control, it is to be condemned entirely, and scarcely a religion or a philosophy can be found which has not advised, nay, even ordered, its absolute repression, and held up celibacy as the ideal state. Here, as elsewhere, morality is far too exclusively engaged in shrieking—"Don't!!"

Fortunately, however, its counsels, commands, and threats have about as much effect upon the mighty sweep of this holy impulse as Dame Partington's broom had upon the tide of the Atlantic. And because it dares to defy their petty authority and disregard their edicts, priest and philosopher alike proclaim it an outlaw, and a war at extermination is set on foot. This soon collapses and they decide to tolerate it. As a last stab, they unite in stigmatizing it as a low, "animal" appetite, and that alone was enough to damn it for centuries. But the latter term carries no condemnation with it nowadays. On the contrary, the fact of an instinct being shared by the lower animals is good presumptive proof that it is of great benefit and value.

We have reason to thank God that the sexual instinct, one of the noblest, holiest, and most elevating that stirs our bosom is an "animal" one, and consequently far older and stronger than we are. It is backed by the life of all the ages and throbs with all the pulses of nature.

Its worst, and I had almost said its only, perversions are *human*, and the results of "reason" and convention.

But this is not the only ban under which this wonderful faculty of ours is laid. Not only is its exercise to be barely tolerated as a concession to weak, sinful human nature, but its very existence is to be ignored as completely as possible, and an imitation instinct known as "modesty" has been invented and developed for that special purpose. Its principal function is to deny the existence of the very sentiment which called it into being. That it is a virtue of the finest water, all sorts and conditions of men unite in testifying, but it has one peculiarity so singular as to provoke mention. It begins just where innocence ceases. The first thing that our first parents in Eden did *after they had fallen* was to discover that they were naked and make unto themselves aprons of fig leaves. Between these two influences our grand sexual functions have gradually come to be regarded as positively disgraceful in themselves, and the parts concerned in them as something to be absolutely ashamed of. Even in scientific nomenclature they are styled the "pudenda," "things one ought to be ashamed of." As for the sexual appetite, the most important and overmastering impulse which moves the race, instead of its excesses alone being reprobated, it has become a sentiment, the movings of which no moral man would dare to avow openly, and which a modest woman would die rather than confess to her nearest friend. The impulse has been degraded so low that its mere possession is sinful. Is this a natural, healthy, rational attitude No, nor a moral one either. This feeling alone produces the very excesses it was invented to check.

And what is the real rank and dignity of this

*Read before the American Society of Medicine at Baltimore, May 4, 1895.

despised and berated function? The most important, the highest, the holiest. Listen to that brilliant champion of evangelicism, Drummond, in his fascinating attempt to convince the Apaches of science that they are or ought to be orthodox Christians if they only knew their own province a *little* more accurately, and could take a broader view of its relations (in which he comes perilously near succeeding in a way he little intended). In the light of the Gospel, according to Darwin, he declares that "Sympathy, affection, fidelity, sacrifice, indeed all those noble traits included under the term altruism, spring from the reproduction instinct." Instead of being subversive of all morality it is the foundation-stone of it. With its feeblest and blindest flutterings altruism, the regard for others, is born.—"Ascent of Man," Henry Drummond.

Unselfishness, sacrifice, is no recent development due to "revelation," but goes back to the Ameba itself. From fission to parturition reproduction is self-sacrifice. And from the results of the process, from the care and nurture of "these little ones," have grown every atom of our morality, from earth-buried foundation-stone to heaven-soaring pinnacle.

In the light of the fifth Gospel we are just beginning to see the eternal truth of the saying of the first Gospel, "Suffer little children to come unto Me for of such (aye and *from such*) is the Kingdom of Heaven." True manhood, true womanhood, in the highest sense, is impossible without reproduction, while as for love, sympathy, philanthropy, sense of duty, it has simply created them. "The stone which the builders rejected is indeed become the head of the corner." Even the much lamented power of the sexual instinct is simply proof of the overwhelming importance and value of the function to the race, and the man or woman who can suppress it entirely is *less* than human rather than more, and will surely become *inhuman* sooner or later. The first duty of man is to perpetuate the species. The race has the first mortgage on him, and has had ever since he was a sea-weed.

If marriage is a failure it's because the breed is, and "the Caucasian is played out." Our whole social, ecclesiastical and political organization centres round this institution as neucleus. Civilization rises from the family, through the clan, the tribe, the State, to the nation. "Charity," in the true sense of love-of-one's neighbor, literally "begins at home," and gradually broadens to include the tribe, the nation, the human race, in its scope. Indeed the family, the home, need but to be mentioned to be accorded the rank of *the* great and only true civilizing, humanizing, spiritualizing influences, and any nation which begins to weary of their control is marked for destruction.

Neglect of, or escape from, their obligations, is ruinous to all concerned. We all lament the sad lack of home-training so obvious in the children of to-day, but we forget that the lack of training suffered by the American parents of to-day on account of the scarcity of children is equally hurtful. This is the age of untrained parents, and they need training as much as children. The training of children works both ways, like mercy "it blesses him who gives as he who takes," and no man's or woman's education is more than half finished without it. Infancy, as Emerson has said, is indeed "a perpetual Messiahship."

And yet we constantly hear this magnificent sexual instinct of ours shrieked at and berated as if fornication, adultery, prostitution and rape were its chief and commonest results. Truly, "The evil that men do lives after them, the good is oft interred with their bones." The instinct (like all other natural ones) is at least a hundred times as powerful for good as for evil.

Let us consider now for a moment the attitude of etiquette and morals—too often interchangeable terms—towards the sexual function, in the light of the importance of the latter. There is only one word to describe it, it is simply *idiotic*.

In the first place they attempt and assume to absolutely taboo the whole subject, after the fashion of that other bird of equally brilliant plumage and gifted intellect, the ostrich. Not only the sexual organs themselves, but even the whole of the body which is covered by the clothing under which they are hidden is forbidden to be mentioned or referred to in "polite" society. According to its canons the entire body from the neck to the tips of the toes is a sexual organ. The origin of this lascivious refinement is obvious, for the mention of the regions which happen to be merely geographically adjacent to the forbidden parts, and which no pure-minded or well-bred person would dream of asso-

ciating with them, such as the chest, the abdomen, the legs, is as severely censured as that of the parts themselves. To such an insane pitch is this "nasty-niceness," as Aunt Tabitha calls it, carried that we have probably all heard reference to the "limb" of a piano, or the "limbs" of a pair of dividers.

While there is some doubt as to the true nature of much which passes for personal modesty, there is none whatever in regard to this society variety. It is a reticence born originally of a diseased imagination or a guilty conscience, discreditable to the individual displaying it, and disgraceful to the society which exacts it. Instead of being, as it mincingly affects to be, the very pink of refinement, it is the essence of vulgarity. "*Honi soit qui mal y pense,*" as the chivalrous King Edward said when he picked up the garter dropped by one of the ladies of his court.

When we come to the absolute ignorance of their most important function, which this taboo entails upon many of our boys and girls, the case becomes a most serious one. How many of our boys have the true meaning, uses, and dignity of the sexual organs delicately, but plainly, explained to them before the age of puberty by their fathers, or how many of our girls by their mothers? I fear scarcely ten per cent. The first knowledge most of them have of this wonderful subject is from the filthy lips of some vulgar servant or prurient older school-mate. Is it any wonder that, driven by natural curiosity and the powerful impulse of awakening sexual consciousness, and ashamed to inquire of those who ought to be their natural instructors, they resort, in an ignorance, as pitiable as it is deplorable, to experiment upon themselves, upon one another, nay—even upon the lower animals. Truly, ignorance, is the very mother of vice.

But the most fatal result of this extraordinary attitude of both morals and etiquette is the extent to which the sacred obligations of exercising the reproductive function is destroyed. Our young men and young women of the "better classes" calmly debate the question as "to marry or not to marry." To be capable of such hesitation is a sign, not of self-control, but of degeneracy. After the alliance has been duly arranged for and formed, then the question is to be discussed whether it shall be permitted to result in anything visible to the naked eye; and if so, after how long delay, and how many, or, more correctly, how few of them. And from these two sources spring the head-waters of the reeking stream of *Prostitution.* Its current is swelled mainly by the men whose incomes or positions are not regarded as "suitable" to marry on, and those who having married "can't afford" to have children or don't want to be bothered" with them. The man or woman who, for any such reason, absolutely refuses to assist in continuing the species has committed the unpardonable sin, and is henceforth fit for nothing but conversion into fertilizer. And nature will attend to the conversion with unerring certainty and comparative promptness if not interfered with. Marriage under these circumstances is little better than legalized concubinage. Indeed, the arrival at this decision is but the forester's mark upon the trunk which is beginning to rot at its core, and all her axemen will understand and obey its significance. It is her seal to the death warrant of the race and also of the individual.

Even that modified form of interference with her orders which consists in markedly limiting the number of children, is almost sure to result in serious injury to both individuals concerned and to the community as well. In the first place it is a fruitful cause of prostitution. Many a man is practically driven to the brothel by his own wife, and many another deliberately resorts to it from a cowardly and criminally selfish desire to shirk the responsibilities of manhood. Such a man ought to be branded like any other eunuch. In the second place it is easily the chief cause of abortionism, one of the most prevalent and deadly sins of the present day, whose evil results, both physical and moral, are rapidly coming to rival those of prostitution itself, a statement which needs no emphasizing in this audience. Thirdly, any and every means adopted, from onanism to tansy, result ultimately in serious injury to the nervous system of both parties concerned. Fourthly, it rears the children who are permitted to appear in an oligarchy or aristocracy instead of a democracy, and thus deprives them of one of the most valuable parts of their education in hardiness, self reliance and self control. Children who are less than three in a family are nearly always "spoiled."

In short, limiting the size of families has ever been and still is the chief and most potent factor

in the decay of nations and the fall of civilization. It is literally a sin against the Holy Ghost, for it is the thwarting and denying of our deepest and holiest instinct by filthy huckster-like mammon worship, a veritable making of our "Father's house a house of merchandise." And like such sin "it shall not be forgiven." Every nation in which it had notably prevailed has either stagnated or decayed. The grand old eagle-eyed, bull-chested Roman breed was literally extinct from its ravages centuries before the Empire fell. The stinking stagnation of China and India is largely due to it in the form of infanticide.

And to-day we can study the process in the yet living subject, in our sister republic, renowned alike for the small size of her families, the brilliancy and healthfulness of her prostitutes, the commercialization of her women, both in marriage and harlotry, the strict economy and thriftiness of her lower classes even in respect to manhood and feminine honor, the filthy pessimism of her literature, and the excess of her death-rate over her birth-rate.

The latest and most extraordinary development from the theory of the sinfulness of sex is that which is in these latter days brayed into our ears from every "suffragist" platform. That child-bearing, instead of a factor in woman's development, is absolutely a hindrance to her higher education, a clog upon her freedom and a mortal enemy of "culchaw." In fact, as a "club-woman" tersely expressed it to a friend of mine a few months ago, "Only fools bear children." There is only one thing which need be said in regard to this delusion, and that is, it has its uses. It prevents the continuation of the breed. Neither the "emancipated" woman at one end of the scale, nor the prostitute at the other, propagate their kind, and society has reason to be thankful in both cases.

What then is the excuse for this attitude of hostility toward the sexual impulses? Their excesses only. Only one of these is now to be considered, but it is generally regarded as the most serious. It certainly is prevalent enough. It has existed from the beginning of history, nay, of society itself; it appears in every race above savagery, in every clime, under every religion and form of government. It has the universality of an institution of nature. It has formed for itself a distinct class or caste in every society, it has its tutelar divinity in every temple, its patron saint in every hagiology. It can even boast of an odor of sanctity. It has formed part of the ritual of most religions and has been more or less directly recognized, if not endorsed, by all. And yet it is distinctly a product not of nature, but of civilization. It is not "*animal*" but essentially *human*, like most of our vices.

No trace of it is to be found in any animal community, and a very little among savages. It is one of the "flowers of civilization," and at bottom commercial, "*bourgeois*." Instead of a sin of instinct, it is a sin against instinct, directly on the part of the female, indirectly on the part of the male.

To a woman it is a filthy trade, "the horizontal trade," as Heine calls it, with even more truth than sarcasm, while the man has about as much right to urge his "appetite" as an excuse, as would one who turns from healthful food to glut himself upon garbage. That the exercise of the sexual function is necessary to the health of the male at any age is a pure delusion, while before full maturity it is highly injurious.

Prostitution is a crime against nature. The attitude of the anthropologist, the naturalist, towards it may be summed up in one sentence: "It needs must be that offences come, but *woe* unto that man through whom they come." And yet it must perform some useful function, for it everywhere exists.

Another singular feature about it is its absolute irrepressibleness and unmanageableness. Ecclesiastical, civil and military authority have all in turn utterly proscribed it and repressed it with ferocious vigor, and at times all three have been united in one determined effort to root it out, as in the Papal dominions for nearly two centuries, but the utmost they could accomplish was to change its form and increase its extent. They simply learned, what we in Iowa have just been learning again in the costly school of experience, that "prohibition does not prohibit."

Nor does the attempt at "regulation" fare much better. From a careful study of all the authorities I could secure and observation of the actual condition of affairs in several of the European cities, I am driven to the conclusion that the results of regulation are about as follows:

1. A small diminution in the number of registered prostitutes and a large increase in that of clandestine prostitutes; the decline of the brothel and the enormous multiplication of the grisette.

2. A marked increase in the number of men indulging in the vice, on account of diminution of fear of infection, and what is even more potent, removal of all risk of interfence by the police, of arrest in some "raid," and the consequent possibility of publicity in the police-court.

In short, it puts the stamp of safety and respectability upon the whole business for both sexes. A Parisian or a Viennese "takes a woman" just as naturally and as frankly as a New Yorker or a Londoner takes a cigar or a dinner, and the prostitute of the former cities has almost as much self-respect and pride of station as the married woman.

3. It diminishes the marriage-rate of the community by rendering concubinage in some form safe, popular and economical.

4. It increases the ratio of illegitimate births, by obvious causes. Paris, the Mecca of this system, has the highest illegitimacy-rate in the world, twenty-six in the one hundred births or one-fourth of all.

Finally, it does not even diminish venereal disease, first, because the most fruitful breeding-ground of syphilis and gonorrhœa is *not* among prostitutes but among "clandestines," so-called "sempstresses," waiter-girls, chamber-maids, etc., and "amateurs" of all descriptions, and secondly, because the most rigid and skilful inspection can find no trace of disease in a woman who may develop well-marked primary or secondary symptoms before nightfall, and infect a dozen men before morning. In short, from the theological, the legal, and the philanthropic standpoint the case appears not only ruinous but well-nigh hopeless.

When, however, we turn and approach it from a medico-ecomonic point of view, its aspect alters completely, and I venture to claim it as one of the grand selective and eliminative agencies of nature and of highest value to the community.

It may be roughly characterized as a safety valve for the institution of marriage. This, of course, does not imply approval or endorsement of the process, for though the escape of a certain amoun of steam is beneficial to the engine, it is "a very cold day" for the steam that escapes.

It is simply a huge sewer, a garbage dump, a crematory, into which are hurled the least desirable elements of both sexes, degenerate men and degraded women, for conversion into more useful and less odorous materials.

I think it would be hard to find a subject upon which there is a more "plentiful lack" of reliable information and data of real scientific value.

This is unavoidably inherent in the nature of the case for obvious reasons. After a brief but bootless search through the authorities, I decided to appeal directly to the only class of men who possess both the information and the training to qualify them to speak with authority. I accordingly sent out a number of letters containing a list of questions to the leading physicians of New York, Philadelphia, Boston, New Orleans, St. Louis, Chicago, San Antonio, and San Francisco, also to a number of practitioners in smaller towns, thus including every section of the Union. Although the number of replies is small, about thirty, scarcely one-sixth of the total number of letters sent out, yet there is such a substantial harmony through them all that they form at least a most suggestive "straw" to indicate the direction of the current of professional opinion on this question. And this straw assumes the dignity of an indicator when we further add, that these thirty were those that felt themselves competent to speak definitely out of one hundred who replied to my letters, and that the list included such names as Gihon, Parvin, Edson, Price, Hare, Bolton, Bangs, Bernays, Dudley, and Chassaignac.

The first point to be considered in an economic study of this question is the motive which induces women to enter this profession. By this term I mean, of course, the dominant motive. It is freely recognized that no *one* cause alone impels any woman to this pursuit.

The following is the average obtained from all answers on this point:—

Love of display, luxury, and idleness	42.1	per cent.
Bad family surroundings	23.8	"
Seduction, in which they were innocent victims	11.3	"
Lack of employment	9.4	"
Heredity	7.8	"
Primary sexual appetite	5.6	"
	100.0	

This makes a showing strikingly similar to that

of the criminal class among men who are recruited mainly from the idle and shiftless among all classes, and from the defective classes. These two causes, including heredity, accounting for nearly seventy-five per cent. in the above table. It may be regarded as emphatically a *trade*, chosen from love of idleness, of luxury, and absence of sense of honor, or decency. Even Du Chatelet, after assenting that over sixty per cent. are driven into it by seduction, desertion, and want, admits in a lucid interval "C'est le desir de se procurer jouissanses sans travailler qui est don ans le premier rang de causes." Again "C'est la vanitie et le desir de briller." Bitter as is the scorn and contumely heaped upon the prostitute she deserves it all, for she has in the vast majority of cases deliberately sold her birthright not for pottage, but for champagne and tinsel.

In reply to the question what is the chief and what is the second cause of prostitution, the results are, from twenty answers :—

	I.	II.
Love of display, etc.....	10	10
Bad family surroundings.....	4	10
Heredity.....	3	
Seduction.....	2	
Lack of employment.....	1	

Here the results are singularly uniform and strongly emphasized, the conclusions from the former table.

The next question relates to the class of society from which the mass of our prostitutes come, and I know of no point upon which popular impressions are more widely generally erroneous. The prevalent view appears to be what might be described as the "W. C. T. U." one, that its priestesses are all the victims of man's lust and base deceit, and drawn alike from the mansion and the hovel. Like most of the conceptions with which this body has blessed the world it lacks the support of facts.

Out of twenty-one answers to this question eighteen reply "lower," "lowest," and "poor and defective," "factory girls," or some equivalent term. One replies "lower middle" and two "middle."

Now as to the grade of education of these recruits, seventeen reply "very low," "uneducated," "analphabets," etc., and four reply "fair" or "average." This corresponds with the results of Du Chatelet, who found that the prostitutes of Paris practically all came from the laboring or artisan class, and especially from those whose lack of intelligence and persistence makes them mere day laborers, "roustabouts," as the modern term is. By an elaborate examination of their certificates, he also found that of 4,470 prostitutes, 2,332 could not sign their names (fifty-five per cent.), and 1,781 could sign "but badly," leaving only 110, or barely two and five-tenths per cent. who could write at all, or legibly.

In short, as a professional man of extensive opportunities for observation, once remarked to me, "I have seen and studied thousands of these women all over the Union, and have never been able to detect any difference between them, which was not the work of the milliner and the upholsterer." As another of my friends expressed it even more tersely, "Out of thousands I have never seen one with good table manners."

There are, of course, exceptions to the rule, but the prostitute possessed of a spark of refinement, education or intelligence, is extremely rare, and usually very soon either marries or becomes owner of an establishment, and in either case retires from active practice.

And just here I would like to say one word in correction of what I believe to be another popular error as to the personality of a prostitute, and that is that she is usually beautiful. The advocates of the seduction-theory even go so far as to declare that she must be, otherwise no one would be tempted to seduce her, which is a fair sample of their logic. From a somewhat extensive experience with women of this class in the general hospitals of London, Paris, and Vienna, and a systematic study of the physiognomies of thousands of them upon the streets of the above cities, and of New York, Philadelphia, and Chicago, I have no hesitation in declaring that a handsome, or even attractive-looking prostitute is rare, and that the average of beauty is lower among them than in any class of women. The only important exception to this statement is the unchaste class of women among actresses and artist's models; who are no real exception, as they are almost forced into vice from the extreme exposure and pressure of their occupation. Whatever other evils the "fatal power of beauty" may be responsible for, it has no more to do with prostitution

than "the flowers that bloom in the spring." Men do not go upon the street or to the brothel to gratify their artistic sense for beauty any more than to seek intellectual companionship, but to get "the pound of flesh" that their lust demands, and the most "popular" prostitute is the one who is best capable of filling this demand to the utmost.

Even the majority of the most fashionable members of the demi-monde, mistresses of the wealthiest and most aristocratic "men-about-town," are creatures whom an anthropologist would trust about as far as he would a rattle-snake, and whom an artist would shudder to look upon. Here again is a point of resemblance to the criminal classes of whom the warden at Millbank Penitentiary declares that "a handsome face is a thing rarely seen in a prison, and a pleasing, well-formed face, never."

As everywhere else, so even here, beauty is a sign of purity and wholesomeness, a safe guide in nine cases out of ten.

The next question is, what class furnishes the largest proportion of its own members to the ranks of vice? In other words, what occupations seem to most favor this downward tendency? The unanimity upon this point is practically complete. Of twenty-two answers sixteen say "factory girls," "saleswomen," "waitresses," etc., and four say "domestic servants," and two "those too idle to have any occupation." In short, it is the women who are engaged in public occupations who are most in danger.

Again, we have the commercialization of women as a powerful factor in the production of this vice. It is based upon a trade instinct, pure and simple. Space does not permit me to enter upon the subject here, but I wish to record my solemn and sorrowful conviction that the woman who works, outside of the home or the school, pays a fearful penalty, either physical, mental or moral, and often all three. She commits a biologic crime against herself and against the community, and woman-labor ought to be forbidden for the same reason that child-labor is. Any nation that works its women is damned and belongs at heart to the Huron-Iroquois confederacy.

Now, as to the much-mooted question of the life-expectation of the prostitute after she is fairly embarked.

The "Talmage" view has been loudly trumpeted abroad, and as for once, it is partially correct, there is little needs to be said. The average of twenty-two observers gives the life duration at nine and five-tenths years, nearly double the popular one, but short enough. The same method gives the death-rate as seventy-five per cent. greater than that of normal women of the same station, but the causes of this increase are markedly different from those usually not only popularly, but also professionally, imputed. *Every* observer gives alcohol the first place as a factor, venereal disease comes second, morphine, cocaine, chloral, etc., third, suicide fourth, irregular hours and life, fifth. Alcohol would thus appear to be doing as useful work among women as it is among men. It is one of our greatest "missionary" agencies, and, unlike all others, its "conversions" are usually permanent.

Last of all comes the question of the effect of this institution upon the propagation of the species. Do women of this stamp leave descendants? Very seldom.

The deduction from all the answers is that barely three and one-tenths per cent. of prostitutes bear children at all during the ten years of their career. The birth-rate of healthy married women during such a term at this age would be nearly 200 per cent. Like all other evils, prostitution is self-limiting. The reason for this sterility is obvious. Disease of the sexual organs, syphilis, "preventives" of every description, abortions, and infanticide, easily account for it. Of the children born alive, very few survive, from ignorance, disease or neglect.

As to the proportion who marry the answers vary, widely ranging from 0.1 per cent. to 75 per cent., the average being 13.2 per cent., but upon the next point there is substantial agreement; *viz.*, that those who do are practically sterile, the answers as to fertility ranging from "barren," "very sterile," "very low," to "unfavorable," about 1.6 per cent., except one man who actually asserts that it is "the same."

The proportion who permanently reform is variously estimated at from "one in a million" to 30 per cent., but the average is low; *viz.*, 6.8 per cent.

This is probably not far from correct, for even the managers of Bethels and reformatories for this

class sorrowfully admit that the number who come under their care are but a very small proportion of the entire class, and even of these only a moiety are permanently improved. The secretary of a large society of this sort (Mr. Talbot) estimates that in the eighty years previous to 1845 only 14,000 or 15,000 women had been within the walls of all these institutions in London, or less than 200 per year.

To sum up then from the female side of this institution, our conclusion would be that it is concerned principally with the most worthless varieties of women, the degenerates or criminals, and the idle, the mercenary and shameless of the working classes, women in short, whom the community can well afford to spare.

That these women, when fairly in its grasp, are practically, absolutely, prevented from propagating their kind during their career, and rapidly destroyed if they remain in it. That very few marry, and those who do so are barren in a high degree, in short, it is an eliminative agency of high value and wonderful efficiency for first sterilizing and then rapidly destroying the worst specimens of the sex—women whose "reform" and child-bearing would be a curse to the community. No need to spay the prostitute or castrate the criminal, they'll do it themselves if they are just given a little time.

What now is the effect of this vice upon the men who indulge in it, and, through them, upon the community? Practically the same, namely, the sterilization of the unfit. The more one studies the venereal diseases the more one becomes impressed with the opinion that their deadly virus is aimed, not at the life of their victim, but at his or her power of reproduction. In fact, both gonorrhœa and syphilis are very seldom fatal in women, and only exceptionally so in men, popular and even professional impression to the contrary notwithstanding. But they are most effective sterilizers for a period varying from six weeks to six or seven years, and not unfrequently totally destroy the reproductive power. This is strikingly true of syphilis. Suppose a man becomes infected at a brothel. Once this disease has appeared, for a period of at least two years, not merely his semen and genitals, but his saliva, his lips, every sore upon his body, every drop of his blood, is actively contagious. He must refrain from sexual intercourse, or, if he disregards this rule, he will not only infect his wife with the loathsome disease, but what is more significant, any conception resulting, in the great majority of cases, will terminate in a miscarriage, a still-birth, or the production of a child which dies of syphilis within six months of its birth. And this history repeats itself until the taint gradually dies out of the blood, a period of at least two years under the promptest aud most skilful treatment, but which, under neglect, or with a later infection of the wife, may extend to five, six, or seven years. This may seem an overdrawn picture, but Turner declares that 85 per cent. of syphilitic children die before the sixth month. Kassowitz gives the percentage of children *born of syphilitic parents*, either still-born or dying within six months, at 55 per cent., and Sturgis reports that 71 per cent. of the children of such parentage, born in the Moscow Hospital, die within that period. By and by the virulence of the poison dies down, a child is born that barely escapes with its life, another by a little wider margin and so on till healthy children can be produced. But what of these who escape? Stunted: blear-eyed, pitiable, with sunken noses, opalescent cornea, scarred mouths, and notched teeth, they are degeneration incarnate. I have seen hundreds of these poor creatures in our large hospitals, the oldest children of their families, literally victims of "the plague of the first-born," the first of three, five, even seven, or eight fœtuses and children to survive the attack of the virus, and I have yet to see one who has passed thirty years of age.

Iarnowsky reports a suggestive group of three couples infected by syphilis who produced twenty-two children; of all these there came only one healthy adult man. Syphilis is more merciful than the Jehovah of the Decalogue, for it usually suppresses the second generation before it acquires consciousness, and permits no third generation to appear to be "visited with the iniquities of the fathers." Like all other diseases, it is self-limiting in the individual or the species. It is, however, largely a question of intelligence and self-control on the part of the original victim, for simply by strict abstinence and a rigid adherence to the old saw, "A night with Venus, a moon with Mercury," for two years syphilis can be as certainly and almost as completely cured as scarlatina or typhoid. And this not only as regards

the secondary or venereal stage, but also as to the dreaded tertiary, or individual Nemesis, plague, with its Pandora's box of locomotor ataxia, cerebral gumma, "g. p. i.," meningitis, retinitis, laryngitis, etc. Thus not only as a sterilizer, but also as an encourager of intelligence, in popular language, as a "fool-killer," it has few equals.

But what as to the other, milder and far more commoner venereal disease, gonorrhœa? This has usually been regarded not only popularly, but also professionally, as a mere trifle, entailing generally some temporary discomfort, but of little more real importance than an ordinary "cold in the head." It is purely local, and usually cured in six or eight weeks, and most men can easily restrain themselves for that length of time, indeed the disease saves them all trouble on that score during the first half of the period. But what of the harvest?

There is a change in professional feeling which bids fair to amount to a revolution.

From the bacteriologic laboratory on the left wing comes the startling declaration that the "cure" of gonorrhœa is merely the establishment of toleration of the presence of the gonococcus, on the part of that individual's urethra, and that its discharges still remain virulently contagious to healthy genito-urinary passages. In fact, that the seminal fluid has been found swarming with gonococci, a year or more after the "cure" of gonorrhœa, of which I have just had a painful case brought under my own observation. There is a sharp rattle of musketry from the right wing, where the reckless laparatomist brigade in their fierce pursuit of the deadly ovary and the treacherous tube have suddenly stumbled upon another ambuscade of the enemy. It is our old friend the gonococcus, who their scouts declare to be concerned in eighty-five per cent. of their salpyngitis onslaughts. Here again venereal disease, *plus the laparatomist*, is a most efficient sterilizer. And at last we have reason to be thankful even for celiotomy.

But what of the great mass of veterans in the centre, the clinicians, the real infantry of the line in the army of medical progress, the Ironsides of the host of science, who indulge in no boastings or triumphing before the battle, or pyrotechnics of any description, or guerilla atrocities of any sort, but simply move steadily, irresistibly forward, holding every inch of ground they gain. From every division come reports of serious casualties, of life-long and even fatal strictures, of cystitis, of young men crippled by gonorrhœal rheumatism, of thousands of little children with eyes sightless from gonorrhœal ophthalmia, of endometritis, of cellulitis, and more significant yet, of orchitis, of testicles which retain their form but not their function, and recently of semen which is swarming not with spermatozoa, but with other micro-organisms which have no tails and cluster in groups.

More than one of the leaders goes so far as to send the despairing message: "It is doubtful whether gonorrhœa is *ever* cured!"

Here again, "justice may move with a leaden foot, but she strikes with an iron hand."

To sum up, the whole mechanism of prostitution is an engine of deadliest efficacy in sterilizing and ultimately destroying the worst elements of both sexes. To say that it also involves fearful and widespread suffering and damage to innocent women and children, would be as true as it is pitiable and harrowing, but I firmly believe that this is much less both in extent and painfulness than is usually stated, and is from a purely economic standpoint only, far overbalanced by the benefit resulting to the race. "A companion of fools shall be destroyed" is no vengeful threat, but a simple statement of a stern, necessary natural law. Pain, disease and death are hard to bear and harder to look upon, but they are among the greatest benefactors of the race.

The only way to check its action is to reduce to its "anatomically necessary" limits the class upon which it is sure to act. Men should be taught the sacred duty and true dignity of reproduction; that any attempt to avoid this duty brings its own punishment. That their sexual powers belong not to themselves, but to the race, and every exercise of them must result ultimately in either a pregnancy or syphilis. That they cannot hope to enjoy the privileges and pleasures of manhood and shirk its responsibilities.

Women should be taught to trust their instincts, for in them the maternal impulses is stronger than life itself. That like every other natural instinct, it is of highest benefit not only to the race but also to the individual. That any attempt to

thwart it, or even failure to give it proper development, will result in either dwarfing or decay.

The freedom of intelligent, refined conversation upon sexual subjects ought to be broadened, it should no longer be considered indecent to speak plainly. Most of the flavor of obscenity which hangs about the discussion of sexual matters is due to this very restriction. No excuse or danger should be left for boys and girls on the grounds of ignorance of this important function. In other words, intelligence, altruism, true refinement, should be promoted by every possible means, and Nature will continue to assist us by emphatically discouraging their opposites.

Above and beyond all we should foster, glorify, deify if necessary, the one instinct in man's bosom which can master the sexual, the highest, the holiest, the strongest of which he is capable. His love for the one woman who is or is to be all the world to him. Once touch this spring and he is safe. Well may all of clearest, and deepest vision among us, the poets, never weary of singing its praises. The age of chivalry should be brought back in nobler, truer form.

Lust laughs at opposition and exults in danger, but sinks ashamed at the whisper of love. Impress upon every man not his own danger, but that of his wife that is to be, of his children yet unborn. Nay, further, make him to see that the last insult he can offer to the one for whom he would cheerfully lay down his life, is to make, in the burning words of the apostle, "her members the members of a harlot" and prostitution will disappear from the face of the earth.

HOW VAGINAL DOUCHES SOMETIMES CAUSE SEVERE ACCIDENTS.

BY DONALD B. FRASER, M.B., M.R.C.S. ENG.,
STRATFORD, ONT.

On June 4th ult. attended Mrs. W. in her confinement and instructed the nurse to give her a vaginal douche of hot water twice a day.

A week later received a message to visit her, when I was told by the nurse the patient had an abnormal condition of the vagina interfering with the use of the syringe. I then gave the patient a vaginal douche with the syringe the nurse had employed, but met with no difficulty or abnormal condition. To make sure everything was right I made a digital examination, and found cervix very low down, os widely dilated and much relaxed, allowing index finger to pass easily through it into cervical canal.

Requested the nurse to make a similar examination to ascertain if the structures in the vagina had not been mistaken by her for an abnormal condition of it as well as the obstacle to the introduction of the syringe encountered in attempting the last douche.

She acknowledged them to be one and the same, and related how she had felt the point of the syringe pass through a ring-like structure—the os—while introducing it to give the last vaginal douche.

On this occasion it was the ordinary enema syringe with long nozzle, measuring not less than five inches, that was used, and the nurse kept the point of it well to the front in the vagina, making it more difficult to avoid the os.

The patient maintained she felt the injection each time in the uterine cavity, and while receiving the last treatment complained of a good deal of pain, discomfort and a feeling of faintness, followed by a considerable hæmorrhage which greatly alarmed both patient and nurse.

I now realized the cause of unpleasant, troublesome and dangerous symptoms in certain cases arising from the improper use of the syringe in connection with the vaginal douche. I remember this same patient, while receiving similar treatment after one of her previous labors, experiencing suddenly excruciating pain and great shock that produced an alarming state of collapse followed by a very severe attack of metritis that almost proved fatal. After most of her labors the patient suffered from somewhat similar attacks, while the vaginal douche was being given, but they were not so severe.

I have a very vivid recollection of another patient who had an abortion about fifth month, and for whom I ordered a vaginal injection of hot water. The nurse had scarcely began administering the douche when the patient suddenly felt a severe pain, became pale, gave a loud scream and exclaimed she was dying, lost consciousness and passed into a condition of dangerous collapse.

An urgent message brought me to the bedside of the patient in a few minutes—found her almost

pulseless, extremely pale, gasping for breath, very restless, and in fact nearly moribund.

Sent for a medical colleague, and by our united efforts succeeded in rallying her, and restoring consciousness after a time of great anxiety. After this unfortunate occurrence the patient suffered from a severe attack of peritonitis as well as more or less metritis. She made a slow convalescence, and would never again have a repetition of the vaginal douche.

Such cases have been observed, most likely, in most medical men's experience. The conditions necessary to cause this accident, I believe, are far from uncommon, hence we should be careful not to expose our patients to the dangers involved in this occurrence. Every nurse should be taught to give a safe and efficient vaginal douche, and be made aware of the fact that the point of syringe may be passed through the os into cervical canal in a certain number of cases, and especially if the long nozzle is employed. Under such circumstances the patient receives, instead of a vaginal an intrauterine douche, and is exposed to the dangers incident to the Procedure.

The fountain syringe with short nozzle is to be recommended to nurses, and they must be made familiar with its safe introduction and manipulation as well as with the accidents which may follow its use. The point of syringe is to be kept well posteriorly in the vagina to avoid the os during its introduction. This kind of syringe is safe, easily kept clean, aseptic, and in good working order.

PREFERABLE METHOD OF STERILIZATION AND STORAGE OF CATGUT.

BY J. COPLIN STINSON, M.D.,

Late House Surgeon Post-Graduate Hospital, New York, Hamilton, Ont.

So many unsatisfactory results have followed the use of improperly prepared catgut, as evidenced in circumscribed or diffuse inflammation and suppuration, that it is highly important that the surgeon should obtain the most thoroughly safe and reliable suture material. Taking the ground that catgut furnishes this ideal, we proceed to demonstrate a method by which we secure its sterilization without imparing its durability or strength. Before taking up the sterilization of catgut, we would suggest that in purchasing the material, the preferable is that put up in bowlines,* each one yard long and rolled separately in bunches, as sold by Keller, Nassau St., New York. We select the bowlines because they are more easily prepared and more handy to manipulate in operations.* We thus do away with reels which are cumbersome, besides the solutions and heat having free access to each particle of the material thoroughly permeates the tissues of the bowlines; whereas if the gut is on reels the deeper layers are not so completely influenced; again, during an operation a sufficient number of bowlines can be removed from the glass storage bottle with a pair of sterile forceps without infecting the rest of the catgut.

The method to be commended:

1. Place bowlines in pure ether for one week*.

2. Place in a glass vessel with a glass or screw stop (sterilized), containing 1 in 2000 corrosive sublimate in pure ether for one week.†

3. Place catgut in a bottle with a screw top (sterilized), pour in absolute alcohol to cover gut. Screw down top tightly and put bottle in a glass sealer containing water which reaches nearly to screw top of catgut bottle, replace top on sealer which is set in water to be heated to the boiling point, and maintained at this temperature for 15 minutes; at the lapse of which time catgut is ready for use. During the boiling a small quantity of the alcohol evaporates and there is no danger of an explosion even with the top screwed down tightly. Only a comparatively short portion of the surgeon's time is engaged during the process already described, in return for which he has an absolutely sterile material. After the first step every precaution must be take to insure surgical asepticism, such as sterilization of all articles used in the process, and antiseptic preparations of the hands.

The *modus operandi* is easily explained:

The ether thoroughly removes the fat from the catgut. The bichloride of mercury dissolved in ether disinfects, increases the durability and does not lessen the strength of the material.

As to the alcohol, it is well known that it is not a germicide,‡ if it contains germs the latter will

*Bowlines were first used as routine by R. T. Morris, New York.

†R. T. Morris' method of sterilization of catgut.

‡Sternberg's Bacteriology.

live but not multiply; boiling the catgut in alcohol removes all traces of the bichloride and destroys any germ life which may exist init, thus constituting it the ideal storage fluid. Catgut prepared by the above method is thoroughly sterile, can be kept so for many years, and what is also of great importance, does not require to be chromicized, as it remains about as long in a wound without being absorbed as the chromicized material.

Selected Articles.

TUBERCULAR MENINGITIS AND CEREBRO-SPINAL MENINGITIS CONTRASTED.

Two children admitted to the hospital on the same day (May 8th), were seen by you soon after admission, both evidently affected with some disorder of the brain. Both cases have now run their course, and you saw in the *post-mortem* room, both of the brains. The symptoms were discussed, compared, and contrasted at the bedside, and the true diagnosis was arrived at in both cases; but the subject is so important that a review of the points which led to the diagnosis may be useful to you, now that you have seen the actual state of matters after death.

The case of the older child, a boy eleven and a half years of age, presented little difficulty. We had here a typical case of tubercular meningitis—typical so far as we can speak of types in this disease; for you will soon find that cases differ from each other, and from the "types" you choose to create in your own minds; deviations from the ordinary cause, occur from certain of the usual symptoms being absent, or from certain peculiarities being superadded. In this case, for example, squinting which is one of the commonest symptoms was, and apparently had been, entirely absent. On looking at him, we found a bandage on his arm, and on inquiry, we found he had been treated at the out-patient department for a tubercular abscess of the elbow. This was a point of capital importance in the diagnosis, and made it almost superfluous to inquire into his family history or his previous health, or for the evidence of recent falling off in condition. These points are of great value in diagnosis in many cases, and indeed this boy's mother was said to be dying of "decline," but in his elbow there was obvious evidence, apart from all such inquiries, that our patient himself was effected with tubercular disease; and in presence of grave brain symptoms, the presumptive probability of tubercular disease in the brain, or its membranes, was overwhelming.

He lay almost unconscious, and showed little signs of consciousness even when disturbed. As already stated, there was no squinting; but his pupils were not natural. They were neither very contracted nor very dilated, but they did not respond normally to the stimulus of light. At the first application of light, you might chance to see a contraction sufficiently marked to make you think they were acting normally; but with the light still applied, you would see them dilate again, and indeed go through various phases in this way. This "osculation" of the pupil, as we call it, is a common feature in tubercular meningitis. On watching the effect of the respiration on the pupil, we could occasionally see, in a slight form, what I have called attention to in a communication on Cheyne-Stokes breathing; during the deep inspirations a dilatation was noticeable; a rhythmical dilatation and contraction, with the inspiration and expiration, may sometimes be seen in cases of Cheyne-Stokes breathing whether due to renal, cardiac, or cerebral disease.

In cases of tubercular meningitis we may have the most perfect development of Cheyne-Stokes breathing; but usually, the breathing is more of the irregular type, with recurring long-drawn sighs.

On drawing a nail or a pencil over the skin of the abdomen, I showed you a moderately well developed "tache cerebrale." But you must not allow yourselves to be misled by this name into thinking that this is a pathognomic sign. We get it in typhoid fever, and various other diseases, usually no doubt with signs of nerve disturbance; at present I have in the Western Infirmary the most perfect specimen of it I ever saw, in a girl with Graves' disease.

The abdomen in this body was flat, or it might almost be described as retracted; and this combined with the emaciation, which brought the pelvic bones into prominence, gave the appearance of the "boat-shaped belly" which you have heard of under this or other allied names. The bowels in this case, as is usual in tubercular meningitis, were constipated, both before admission and while in the ward.

Vomiting did not seem to have been a feature in this case; certainly none occurred in the ward.

The temperature was higher than normal, but the degree of fever was not great—100° to 101° in the rectum, the pulse was usually high, 130 to 168 per minute. The examination of other organs pointed to some mischief in the lower part of the right lung.

The course of the case after admission was steadily downward, and he died on May 12th, without any marked elevation of temperature (100° F.) At the *post-mortem* examinations, as you saw, the base of the brain was coated with exudation, the sylvian fissures were glued together on each side, and on lifting up the lobe, the

granular appearance of the tubercles was recognizable. In the right lung a patch of pneumonic consolidation was seen in the lower part, where liquid râles had been heard ; and a cheesy mass of bronchial glands were also found.

In comparing the other case we found some similarity, but many points of contrast also. There was a marked internal squint of the right eye, and also a notable retraction of the head ; both of these, with an obvious impairment of the consciousness and a tense fontanelle, at once suggested meningitis. But the diagnostic significance of the squint was largely affected by the history of its having been there for three months, while the brain symptoms were only supposed to be of at most three weeks' duration. Before these symptoms came on there was a history of what was called "congestion of the lungs," taking the illness back for six weeks before admission. But apart from the squint, the partially unconscious state, and the retracted head, pointed to some brain affection ; the question, however, arose what kind of affection this might be? The pupils were equal, somewhat contracted at times, but sometimes moderately dilated, and a response to light, in the left pupil especially, could frequently be obtained. The child was fairly well nourished, and the history seemed to suggest some acute febrile illness arising out of the so-called congestion of the lungs. The temperature was high on admission (103.4°F.) and continued so (101° F.) to 103° F.) There was a history of diarrhœa, and the bowels were loose on admission and continued so ; this is of very unusual occurrence in tubercular meningitis, and although it does happen occasionally, it always makes one hesitate in the diagnosis. The abdomen, far from being retracted, was actually rather tumid. The persistence of high temperatures after comatose symptoms become developed in tubercular meningitis is quite unusual ; and the pyrexia, the diarrhœa, and the tumid abdomen made one feel inclined to hope that the brain symptoms might be due to the nervous disturbance of enteric fever, as this frequently resembles tubercular meningitis. Even retraction of the head occurs in this fever, as I witnessed last winter in the case of a girl in my ward who recovered after a severe illness, characterized by diarrhœa and other diagnostic symptoms. In her case the retraction of the head was very marked and persisted for some time. For a few days I actually thought we might see this favorable view of the baby's case confirmed as the temperature came down a little. The diarrhœa moderated ; at the same time the nervous symptoms improved, and the retraction of the head became less extreme, and a week after admission the child was conscious enough to play with toys (May 15th). The presence of a *tache cerebral* in this case did not, as I explained, exclude the diagnosis of enteric fever.

Eight days after admission (May 16th), the hopes of improvement were disappointed by the supervention of sickness and vomiting, and by an increased retraction of the head ; this became more and more marked, and for four or five days before death it assumed the feature of a typical opisthotonus, as I pointed out to you. With this aggravation the unconsciousness became more profound, but the temperature still remained high (102° F.) With the disappearance of the partial improvement and the aggravation of the nervous symptoms, one had to give up the hope of the illness being due to the nervous disturbance of entric fever ; but all the points against the diagnosis of tubercular meningitis still remain in force, so I was led to think of some other fever with nervous symptoms as the cause of the illness, and cerebro-spinal fever, as it is sometimes called, or cerebro-spinal meningitis seemed to afford the most likely explanation of the symptoms. When the reaction of the head passed into a regular opisthotonus, the existence of this seemed almost certain. The feeding of the child, as it lay on its side with the head powerfully retracted, was very difficult ; and regurgitation of the fluids through the nose repeatedly occurred. The child died on May 22nd, fourteen days after admission. Tremulous movements of the arms occurred four or five days before death, and when the opisthotonus was most marked, some slight spasm of the legs, with pointing downwards of the toes, was recognized. There was no marked spasm of the hands, but the thumbs were often drawn across the palms. No pronounced convulsions occurred. The temperature ran up to 105° F. just before death.

The examination of the brain showed copious exudation of the gelatino-purulent type, over the whole surface, especially abundant on the convexity of the brain in the sulci. In this case a large amount of exudation was seen at the base and especially in the region of the optic chiasma, a region usually little affected in this form of meningitis. The spinal cord showed no exudation on the anterior surface, but the whole of the posterior surface, from the lower end of the cervical enlargement to the upper part of the lumbar enlargement, was coated with a thick layer of the same gelatino-purulent exudation.

Unfortunately permission was not obtained for examination of other parts of the body. It would have been important to see the state of the chest, particularly as there was a recent history of "congestion of the lung." Special interest attaches to this subject as the microbe of cerebro-spinal meningitis is said to be the same as the pneumonic. In my own practice, last winter, a man died in the height of pneumonia with high delirium, and at the *post-mortem* examination we found meningitis of the convexity. In another case I had some years ago, after the crisis of pneumonia seemed to

be fairly established, a man became affected with alarming nervous symptoms, due no doubt to cerebro-spinal meningitis which was found after death.

In Glasgow, cerebro-spinal meningitis is a rare disease; sporadic cases occur at times, but no epidemic has been recognized here. In Angerline, Dr. William Frew described a small epidemic of this disease in a paper in the *Glasgow Medical Journal* for 1894; and he tells me that lately he has been seeing some cases in the district about Kilmamock.—James Finlayson, M.D., in *Arch. of Pediatrics.*

A BULLETIN ON THE PREVENTION OF DISEASES AMONG INFANTS.

ISSUED BY THE BOARD OF HEALTH OF THE CITY OF NEWARK, NEW JERSEY.

This circular is advisory, and deals only with the prevention of disease. The care and treatment of a patient should be referred to a physician.

A large proportion of all who die are infants one year of age. By far the larger number of infants who die have been fed artificially. It has also been demonstrated that this mortality is chiefly caused by errors in infant feeding.

During the first year infants were designed to subsist on animal food, (namely, human milk;) on this they usually thrive. When deprived of their natural food, the physician, the chemist, and the mother, have been taxed to their uttermost to provide a suitable substitute.

The results of careful investigation and long experience have proved that fresh cow's milk, when it has been modified to correspond to woman's milk, and then, by some proper treatment, preserved from spoiling, is the best substitute food for the infant during its first year.

ARTIFICIAL FEEDING.

The average stomach of a child at birth holds, when full, about two tablespoonfuls.

The increase in the size of the child's stomach is in proportion to its growth or weight.

The health and vigor of after life is undoubtedly laid in the first year, by proper feeding.

Proper infant feeding usually makes muscular children, with nerve force, not always fat ones.

When a food is substituted for woman's milk, it should contain only what nature designed, and in the same proportions.

Nature does not supply bread or crackers, or meat, or granulated sugar; and these should not be given to the infant.

Cow's milk, when properly prepared, furnishes a whole and sufficient diet for an infant, and supplies all it needs for robust health.

Fresh milk should constitute the principal article of food for the infant, even after weaning, and during the greater part of childhood.

No infant, under one year of age, can easily digest cow's milk, until changed; it is weaker in some things, and stronger in others, than woman's milk.

Failures in artificial feeding are chiefly due to three causes. First: Over-feeding. Second: The use of food which is either too strong or too weak. Third: The use of food which is changing or has already spoiled.

The following receipts will change cow's milk into food mixtures, suitable for healthy infants, up to one year:

MODIFIED MILK FOR INFANT FEEDING.

MADE WITH ONE QUART OF BOTTLED COW'S MILK.

For the amount and number of feedings in a day, consult a doctor.

First 6 months.	*From 6 to 9 months.*
The top milk (cream) ½pt.	The top milk (cream) 1 pt.
Boiled water, 1 pt.	Boiled water, 1 pt.
Milk sugar, 700 grains.	Milk sugar, 900 grains.

From 9 mos. to 1 year.

Top milk, 1½ pts.
Boiled water, ½ pt.
White sugar, 3 teaspoonfuls.

Dissolve the sugar in the hot water, add the cream, and divide in separate bottles, putting one feeding in each. Cork them with clean cotton.

One tablespoonful of lime water should be added to every gill of the food.

To preserve the food from spoiling, set the bottles filled, and corked in boiling hot water for thirty minutes. A three-quart covered pail will answer.

THE PROPER CARE OF MILK.

Milk is a delicate animal fluid, highly sensitive to exposure, and quickly spoils unless it receives great care.

Milk is spoiled by the bacteria which falls into it, and which set up fermentations due to their presence in it.

Vessels for holding milk should be made of earthenware, glass, or porcelain, and always be provided with covers.

In open vessels, milk should be counted unclean, for it is thus exposed to invisible droppings of dust.

All utensils designed for milk should first be scoured, then cleansed with soap, and rinsed with boiling water.

Bottles intended for milk should be cleansed coarse sand, baking soda and water; then rinsed and scalded.

Empty milk bottles should be properly cleansed; then filled with boiling water, and allowed to stand until used.

Chemical poisons which germs cast off, and various germs of contagion, are the contaminations in milk most dreaded.

Heat and cold are valuable preservatives when

applied to milk ; but extremes of either are injurious and destructive.

Heat is chiefly used to destroy the numerous germs which contaminate all milk, and which finally spoil it.

Cold is valuable because it retards the growth of germs, while applied to milk, but never any longer.

Milk should never be allowed to freeze, nor be subjected to more heat than necessary to sterilize it.

Milk is sterilized when it has been heated with steam or boiling water, long enough to destroy the germs in it.

Milk is pasteurized which has been heated at 167 degrees Fahrenheit for twenty minutes, and then cooled qnickly.

Pasteurized milk is free from harmful germs, and has not been injured, as when completely sterilized or boiled.

Milk is best preserved when stored in small glass bottles, corked with cotton wool, and kept on ice.

When ice is not available, bottled milk should be immersed in cold water, which should be frequently changed.

When the separate feedings of milk are kept in small, closed bottles, the several portions are equally protected.

THE HYGIENE OF THE NURSERY.

Regular habits, proper food, and long hours of sleep are necessary conditions to a healthy infant.

The three prime essentials in the nursery are fresh air, good food and pure water.

Never put a bottle nipple into your mouth, and then into the baby's mouth ; this will often prove dangerous.

Always hold a baby in your arms when feeding it, in about the same position as if nursing it.

Feeding in the night, after the third month, is both inconvenient and unnecessary ; sleep at night is better than food.

Do not feed the baby because it cries ; this may be due to pain, and it is hurtful to fill an infant's stomach at such a time.

Have a rule for feeding the baby, and do not vary from it ; without regularity the mother becomes a slave.

More infants' lives are taken by over-feeding than by starvation. Never liken an an infant's digestion or diet to your own.

An infant's thirst is not quenched by milk ; it needs clean water to drink with regularity.

Plain boiled water, given between feedings, will often aid the digestion, and satisfy the child when restless.

Vomiting or diarrhœa are indications that the child is either sick or approaching sickness, and probably needs a physician.

Cholera infantum would be of rare occurrence if proper attentlon was always given to the quality and quantity of the food.

A nursing mother who worries, or who is exhausted, or who indulges in excitement, may become a source of danger to her infant.

An infant is a creature of habit, and usually responds to the wish of the mother, if the mother has order in her will.

Rubber tubes, complicated nipples and nursing bottles are dangerous, and should never be used.

Light and loose clothing, frequent bathing or cool sponging, are necessities for the infant in hot weather.

Cleanliness, as applied to the body, the mouth, the food, the vessels, the clothing, the furniture, the floor, the carpets, the beds and the atmosphere, should be strictly observed.—Henry M. Coit, M.D., in *Arch. of Ped.*

UNCURED GONORRHŒA.

In February, 1892, I read before the Surgical Society a paper on Uncured Gonorrhœa. I propose to-night to still further discuss the subject with reference to its characteristics and management in the male. I referred then to the inutility of the "cut-off" in the matter of extension backward to the deep urethra of this disease, the frequency of such extension, its masked dangers to the infected, and its latent dangers to others. The glass test, that has been so frequently and full written up of late, shows the alarming frequency of the existence of active deep infection after all discharge from the urethra has ceased. For determining simply the existence or non-existence of posterior infection in reasonably recent cases, the simple collection of the patient's urine in two clean bottles will usually suffice. There will then be no shreds, but a general cloudiness of the water passed, in the first bottle only, if the disease be confined to the anterior urethra, in both if it has invaded the deeper parts. One must always take the precaution of adding a few drops of acetic acid to the urine to determine that the cloudiness is not due to phosphates.

In chronic cases, cases in which the urine may be cloudy or flaky, and that have a history, subjective, objective, and clinical, pointing to deep and obstinate involvement, an important question of differentiation presents itself. In a general way we may say that as many as five different localities may be singly responsible for the similar symptoms presenting in different cases, namely, the deep urethra, the bladder, the ureters, the renal pelves, and the seminal vesicles. To exactly locate the disease in such cases is by no means a simple affair. It is indeed often an impossibility. More care must now be exercised in the glass test.

The patient should be seen with a full bladder, which, except in acute cystitis, is usually feasible. The anterior urethra, back six inches, should be carefully irrigated with some simple, cleansing hot wash by means of a fountain syringe hung seven feet from the floor, and a Jacque catheter, the patient standing. With a little practice this may be readily and effectively done. Two bottles are then used to receive the urine. The first represents the washings of the prostatic urethra, and therefore of the prostate and seminal vesicles, the second the washings of the bladder, and therefore of it, the ureters, and the pelves. A floating or sinking *tripper fäden* or two, with otherwise clear urine. would indicate a granular deep urethra, and in the vast majority of cases endoscopic examination will confirm this, and furnish us the royal means of at once and effectually working a cure.

It is surprising what strong solutions of silver nitrate may be so applied without any other than the wished-for result. I rarely use in such treatment a solution weaker than twenty grains to the ounce, while sixty grains to the ounce is frequently required and well borne, a striking contrast with the objectionable effects so often following one or two-grain solutions of the same salt applied by means of a Keyes or Ultzmann syringe. I use exclusively in such cases the Otis-Klotz urethroscope, which is exceedingly simple of design and easy of application. By a simple trick the straight Klotz tube may be carried clear into the bladder. It should be passed gently as far as it will go, and then, with the thumb against the obturator to prevent its ejection, the flange should be steadily and firmly depressed between the patient's thighs until the distal end will be felt to pass through the cut-off. It should then be steadily pressed onward until the flange has packed the penis up against the symphysis pubis, and then the obturator withdrawn and the Otis lamp coupled on. The bladder being not wholly empty, a stylet armed with a bit of cotton should be used to remove the few drops of urine present, and the examination and subsequent application are but simple matters of detail. I have frequently by such procedure seen into the trigone. Proper care should be taken to limit the application to the deep granular parts. Silver nitrate is usually the agent used. Of late I have seen good results follow the use of Schering's argentamin.

If, as is however frequently the case, the entire volume of urine is cloudy, in the majority of cases the trouble is cystitis, the parts involved being the prostatic sinus and the trigonal region. Finger is the only authority with whom I am familiar who denies the existence of gonorrhœal cystitis. Ignoring here all discussion of all the good that follows the internal administration of anti-blenorrhagics and diluents, I desire to express my conviction that nothing will so speedily and so effectually cure this condition as persistent daily bladder-washing. Of the agents relied on for accomplishing this end I may mention as best, saturated solutions of boric acid, potassium permanganate solutions, two to four grains to the pint, silver nitrate, one-half grain to the ounce, bichloride of mercury, 1 to 20,000 solution, and one-per-cent. trikresol. These are average strengths. The same method used in anterior urethral irrigation is used here, except that the catheter is carried into the bladder. Half a pint is injected and allowed to escape through the catheter, then, the second half-pint being introduced, the catheter is withdrawn and the patient allowed to void it naturally. Sometimes it is well to leave the second half, if mild, in the bladder for an hour or more.

The differential diagnosis between ureteritis and pyelitis is hardly possible. It should here, however, be borne in mind that those portions of the bladder, other than the trigonal region, are rarely, if ever, involved, and also that the location of the urethral orifices and the character of their epithelial lining both favor gonorrhœal extension. Unless speedily cured by internal medication it is probably only a question of time when gonorrhœal inflammation of the ureters will extend to the pelves. Topical treatment of the ureters in the female has recently been successfully accomplished by Dr. Howard A. Kelly, and also in the male with the aid of the cytoscope by Dr. James Brown, of Baltimore, and Nitze and Casper, of Germany. This procedure, however, so far as the male urethra is concerned, can hardly be considered practicable for other than exploratory purposes. In the instances wherein it has so far been attempted, the object has been to determine the condition of the kidney to be left in a contemplated nephrectomy.

Many a sufferer from pyelitis has had his healthy bladder washed for months, and not a few have submitted to cystotomies for the cure by rest and drainage of a cystitis that did not exist. The modern revival of suprapubic cystotomy has much increased the frequency of this blunder due to faulty diagnosis. If it has accomplished no benefit for the patient, it has at least taught the surgeon a valuable lesson in diagnostic art.

There are several symptomatic features that are common to both pyelitis and seminal vesiculitis. Of these, two are prominent; first the obstinacy with which they persist after the most thorough topical treatment of prostate and bladder, and, second, their intermittent character, that is, their proneness to improve again and again to a point of apparent cure only to relapse in a day or two to their old state of pronounced pyuria. Fortunately these features eventually narrow down our diagnostic work to these two diseases, and equally is it a matter of gratulation that the differentiation is a comparatively easy task. Of course there are other conditions, such as tuberculosis, neoplas-

mata, stone in the bladder, senile ulcerative states, etc., that produce persistent pyuria. It is not of such, but rather of the clearly gonorrhœal deep troubles in the otherwise healthy subject that I am speaking.

Ordinarily the microscopic examination of bladder pus does not reveal much. When, however, we have concluded from persistent treatment and equal obstinacy on the part of the disease, from its intermittency, from rectal and, where possible, cystoscopic examination, that the disease is not in the bladder or prostate, the pus should be carefully examined, not with the expectation of finding tube casts, but with a view to the presence of the caudated and small oval epithelium that comes from the ureters and pelves, a useful yet not altogether reliable guide in diagnosis.

To outline the final elements in the differentiation between pyelitis and seminal vesiculitis it is best to deal with the latter condition first. Each, it will be remembered, is characterized by obstinate resistance to bladder-washing and by intermittency of pyuria. Of the two pathological conditions, seminal vesiculitis alone has a pathognomonic symptom. The history of its occurrence, coincident with an absence of urethral disease, at once suggests the trouble. This is bloody semen. My first case of this sort was a classical one. He had resisted treatment for months, until finally the bloody mishap occurred as he was home coming on a New Orleans sleeper. He brought the bloody shirt to me. It was some eight years ago. I was at a loss to account for it. He went to Hammond, who amputated a liberal section of his scrotum for varicocele. I do not know his history since, I have had a few similar cases. Two recent ones are: P., a married man, with history of a cystitis not diagnosed specific six months ago. He came to me with the statement that, having used a condom at home to prevent conception, he had noticed that its contents were bloody. He had slight pyuria. I made a deep injction of silver, one grain to ounce, and ordered ergot. I have not seen him since. T., an unmarried traveling salesman, treated for acute and declining clap for two months, and intermittent pyuria for two months more, made two trips, each time coming home uncured. He came home the third time, March 20th, with the history of two bloody nocturnal emissions. This case serves me as an illustration of diagnostic methods. I ordered a free saline purge and then examined *per rectum*. It has been very wisely said, by Taylor I think, that the most erudite touch cannot discover the seminal vesicles when healthy. In this case I could feel above the prostate and on each side and beneath the urinary bladder two bodies, much like unfed leeches, soft, round, and an inch or two in length. Milking these after the methods suggested by Fuller, of New York, I produced a pyuria. One case more in this connection. H., a patient well known to many of you, in that he has been operated on for cystic tumor seen by the cystoscope but found wanting after a cystotomy. A free purge and a rectal search disclosed two cord-like, not leech-like, because this is an old case, two cord-like bodies, plainly thickened, and enlarged seminal vesicles. So we may hope, where the question lies between pyelitis and seminal vesiculitis to include or exclude the latter by the history in some cases of bloody seminal discharges, and in most other cases by the presence after milking of pus in the urine.

The first case of pyelitis I ever saw to recognize was seen in consultation in Indiana some fifteen years ago, a septuagenarian, who, and this was considered the great feature of the case, had not tasted food in any form for twenty-one days. He had a fairly well-defined tumor over the right kidney. On three separate occasions in twenty-four hours I was able by manipulation to decrease the swelling and produce pronounced pyuria. Operative interference was denied, and he was gathered to his fathers. S., a young man of strumous habit, presented some eighteen months ago with a furious pyuria. History indefinite. After two months' bladder-washing, combined with cod-liver oil, diuretics, and tonics, the case was pronounced tuberculous kidney. He sought other treatment, and finally, *in extremis*, I learn submitted to a nephrotomy, a quart of pus being evacuated. He subsequently died. Another case, that of D., a young man with chronic cystitis (?), so diagnosed by me. He was treated for a couple of months topically and internally, with no benefit, and a perineal section done for rest and drainage, which was kept up with daily washings for one month, No benefit. Conclusion, faulty diagnosis, pyelitis, probably tubercular. He was sent to the country, and, while never particularly anæmic, he came home much improved, but still with pyuria. About two months ago he contracted a fresh gonorrhœa, which was speedily complicated with first single then double epididymitis. To-day he is relieved of these intercurrent troubles, but the pyuria goes on. He is a fairly robust man, a porter in a wholesale whisky house, and examination *per rectum* fails to show any enlargement of the vesicles.

How shall we diagnose either pyelitis or seminal vesiculitis other than by the methods I have so far laid down? Briefly, it can not always be surely done, but in many cases the following methods will prove of much value: In examining for vesiculitis order first a saline purge or an enema. Empty and wash out the bladder until the returning fluid is clear. Then throw into the bladder four or five ounces of a mild aseptic fluid. Leave it there and milk with the forefiinger *per rectum* the vesicles. If you do not plainly feel them, crowd the forefinger deeply in above the

prostate and sweep downward over the base of the bladder where the vesicles should be. Let the patient rest a short while, and then void the injected fluid. If the fluid is cloudy, purulent, it is a case of vesiculitis. If not, while it may still be of that character, suspect more strongly the kidneys. Exclusion of the seminal vesicles, as I have indicated, goes a long way toward establishing the existence of pyelitis.

In the manipulative examination of pyelitis the procedure is practically the same. After washing the bladder and leaving four or five ounces of fluid in it, the patient should be made to lean over a chair or table and the dorsal and lumbar region should be stroked *a la massage* firmly and for some time in a direction from over the kidneys downward along the course of the ureters. While this is not so sure a means of milking as the rectal process for vesiculitis, it is sometimes of much value. If it fails the first time, at a subsequent trial half an hour or more should be allowed to lapse before the fluid is voided from the bladder—E. R. Palmer, M.D., in *Am. Pract. and News.*

MEDICAL NOTES.

Syphilis, Prof. Horwitz says, does not, as a rule, manifest itself for twenty-one days after incubation.

Pain is most severe in those cases of *pneumonia* which attack the lower lobe, according to Prof. Wilson.

If a case of *abdominal section* presents no bad symptoms, Prof. Montgomery says the dressing need not be disturbed for ten days.

Prof. Keen says that of all forms of *intestinal obstruction*, exclusive of hernia and congenital conditions, 30 per cent. are caused by invagination.

Prof. Parvin says that during the first few days after birth the *child loses weight*, but by the end of the first week it will have regained it again.

If a mother contract *syphilis* a short time before being delivered, she should not nurse her child, as the chances are that the child is not infected.

If the temperature rises to 105° or over, and remains there for any length of time in a case of *yellow fever*, Prof. Wilson says the prognosis is grave.

Prof. Keen says that mild forms of *goitre* are met with in women who are pregnant, and that with each successive pregnancy the goitre also enlarges.

In cases of *epilepsy*, Professor Hare says that females require a smaller dose of the bromides than males. This is true, both in adults and children.

Prof. Wilson says that we do not have a persistent high temperature in *diphtheria*. If it should occur it is not due to the diphtheria, but to some complication.

Prof. Keen says that *abscesses* around the margin of the rectum usually originate from a suppurating pile, or from an inflammation of one of the anal mucous follicles.

The *puerpera*, Prof. Parvin says, should be directed to empty her bladder twelve hours after delivery, otherwise she may unconsciously allow the bladder to become over-distended and prevent spontaneous evacuation.

Prof. Keen says the *femoral hernias* become more frequently strangulated than any other variety, and that very often the first time they descend they become strangulated.

According to Prof. Parvin, the *meconium* is usually passed a few hours after birth; sometimes it is delayed for a few days; if longer, an enema of warm flaxseed tea should be given.

In cases of *shock*, Prof. Hare says that twenty drops of the tincture of digitalis should be given hypodermically, and repeated in an hour if the pulse does not show its influenco.

Prof. Keen says that in *pyloric carcinoma* life can be greatly prolonged and suffering much relieved by dieting the patient and washing out the stomach as often as may become necessary from retention of food.

Prof. Parvin says that it disorders the digestion of a child to allow it to sleep with the nipple in its mouth, for the child taking a sip from time to time keeps its stomach in constant action.

In ileo-colic and colic varieties of *intussusception*, Prof. Keen says that very often the apex of the intussusception comes down as far as the rectum, where, by digital examination it can be felt.

If the mother *does not nurse* her child a few days after delivery, she should, according to Prof. Parvin, be given a saline purge, which he thinks tends to lessen the flow of blood to the mammary glands.

Prof. Keen says that small *gall-stones* retained in the intestinal canal become a nucleus for the formation of intestinal concretions, which increase in size gradually, and finally cause fæcal obstruction.

Prof. Hare says the best treatment for *vomiting* occurring in remittent fever is the administering of small doses of morphine or three to five drops of spirits of chloroform in half a drachm of cherry laurel water.

Prof. Keen says when an operation for *obstruction* is performed, which has been due either to an adherent vermiform appendix or a diverticulum, these parts should be removed near their attachment to the intestines.

In cases of *fistula* after labor, Prof. Hare says a cure can sometimes be effected without an operation by touching the edges of the track of the fistula with nitric acid, thereby causing active granulation to be set up.—*Coll. and Clin. Rec.*

THE MANAGEMENT OF HÆMORRHAGE AFTER TONSIL OPERATIONS.

The frequency of alarmingly profuse hæmorrhage after tonsil operations, with an occasional fatal result, makes this a subject of exceeding interest to the surgeon. Such accidents should not, however, stand as obstacles in the way of performing these operations, for the necessity for operating is both frequent and urgent. Especially in children is the enlarged or hypertrophied tonsil very often met with, and the evil effects of the disease are so apparent to the medical and even non-medical observer, that it often calls for prompt action on the part of the physician. I do not intend here to enter into a discussion of the disease itself, but I would say that within the range of surgical diseases, I do not know of any affection that so often produces a train of more distressing symptoms than a typical case of enlarged tonsils; nor do I know of any operative procedure that gives more decided or permanent relief than their proper removal.

The ordinary hæmorrhage following the operation is of but small conseqence, as, with a little patience and care, the blood soon ceases to flow of its own accord, or, if need be, a gargle of cold salt water suffices to arrest it in the course of a few minutes. But when there flows from the cut surfaces a steady stream of blood, continuing for hours, and when the frightened patient becomes each moment weaker and more nervous and more difficult to manage, then it is that the tact and nerve and skill of the surgeon display themselves to the greatest advantage. A typical case of violent hæmorrhage from an operated tonsil, uncontrolled by the ordinary remedies and means, is an experience that no doctor will willingly confront the second time. Fortunately these very severe hæmorrhages rarely occur, but they *do* occur, and the operator should be prepared to contend with them at any time. The operation is chiefly necessary in children from three or four to ten or twelve years of age, and with an experience of over 3,000 tonsil operations, I have seen but few cases of alarming hæmorrhage in children.

The inference, therefore, is that young children are not very liable to dangerous hæmorrhage—which, for obvious reasons, is a fortunate exemption. But it is in the adult that the great danger lies, because of the hardened tissues of the gland and the increased number and size of the blood-vessels over that of the child.

Generally, the tendency to serious hæmorrhage manifests itself immediately after the operation, or at latest after a few hours. In one of my cases, however, secondary hæmorrhage occurred five days after the operation.

There can be no objection to the trial of the various styptics, for they do in some instances arrest the flow, but they too often fail, and, even when successful, they leave behind most unpleasant results.

The actual cautery applied directly to the bleeding surface has been recommended, but the objections to its use are so obvious that I could not suggest it. But I can recommend compression as a remedy. Pressure applied directly to the wound is the most satisfactory of all means. Pass the forefinger, the end of which is covered with a piece of moistened sponge, or absorbent cotton, into the mouth, and carefully cover the cut surface, and with the wound between the forefinger of the one hand and the palm of the other hand placed externally, exercise a gentle but steady pressure. The hœmorrhage ceases immediately, but recurs upon the removal of the pressure. It is now a matter of courage and confidence on the part of the patient, and physical endurance on the part of the doctor. In most cases, pressure continued for ten minutes to one or two hours suffices to permanently arrest the hæmorrhage, but in rare instances it must be continued through twelve to twenty-four hours. In these last cases assistance must be called in, so that the persons exercising the pressure can be rested at intervals of half an hour. But I have never known this mode of checking the hœmorrhage to fail and I can confidently recommend it to any one having such a case.

I read a suggestion in some medical journal not long since, which I am inclined to think has some merit in it, though I have given it no trial; that is, the hypodermic injection of small doses of apomorphia, with the view of inducing nausea, which is supposed to exercise a beneficial effect in lessening the hæmorrhage. It is worthy of a trial, for I know by experience that extreme nausea bordering on fainting, or actual syncope itself, will arrest the hæmorrhage. Before learning to rely so implicitly upon pressure, I recall several cases, in which the nausea, on account of the loss of blood, fright and nervous shock, became so intense as to be in itself alarming. In three of these cases, after unsuccessfully trying every remedy at my command and when death seemed imminent, syncope followed (in one while lying in bed), and instantly the hæmorrhage ceased and did not recur upon reviving the patients.

But since I have learned what an infallible remedy the pressure is, I have had no such bad cases as just mentioned. If the pressure is properly done and continued long enough, a fatal result

cannot ensue.—A. W. Calhoun, M.D., in *Southern Med. Rec.*

A NEW METHOD FOR ANCHORING THE KIDNEY.—Dr. Reed calls attention to the following anatomic landmarks in anchoring the kidney. Clinical experience teaches that movable and floating kidneys occur more frequently on the right side than on the left. In this connection it is well to remember that the right kidney, when in its normal position, is usually located a little lower than its fellow, and, on the average, measures about four inches in length. The left kidney is usually longer and narrower than the right kidney. The upper margin of the right kidney, when in its normal position, is on a level with the twelfth dorsal vertebra. This throws its margin slightly above the upper border of the twelfth rib, which is an important point to remember in the operation the author describes further on. The left kidney being located a little higher than the right, its upper margin not infrequently is on a level with the lower border of the eleventh rib, and sometimes even reaches a point slightly higher. The right kidney is usually about two and a half inches in width, while the left kidney seldom exceeds two inches, but makes up for its reduction in width by increase in length. They are each about one inch in thickness, which is also an important factor in considering the question of anchoring. By keeping these anatomic memoranda in view, the operator will be able to comprehend the mechanical conditions that are present, and which he must meet in anchoring a floating or movable kidney in its normal position.

Reed's operation consists in making the ordinary perpendicular abdominal incision over the median line of the kidney. As a rule, it need not exceed two and a half to three inches in length, depending largely on the thickness of the abdominal walls. Having made the incision sufficiently large to get the fingers in and bring the kidney to its normal place, he then uses a long needle, varying from five to seven inches in length. Two of these needles are threaded with aseptic silk-worm gut or aseptic silk, using but one ligature, armed with one of these long needles at each end. Having placed the kidney in its normal position (and in the case of a floating kidney having scarified the peritoneum so as to favor adhesions), he inserts his first needle through the upper and inner part of the cortical substance of the kidney, directly through the muscles of the back, coming out between the eleventh and twelfth ribs. The second needle, which is on the other end of the ligature, is also passed through in a similar manner, about an inch from its fellow, through the upper and outer cortical substance of the kidney. These ligatures are tied on the integument. If necessary, another suture is inserted through the outer margin of the kidney, the first needle of the second suture being passed about an inch below the last needle of the first suture, and the second needle of the second suture about an inch below the first needle of the second suture, through the cortical substance of the outer portion of the kidney. By anchoring the kidney in this manner, the entire operation can be performed in not to exceed fifteen minutes, unless there are some troublesome complications to contend with. In tying the sutures, care should be taken to draw them sufficiently tight to not only hold the kidney in place, but to produce sufficient irritation to excite inflammatory adhesions, which are intended to hold the kidney in place, and which are essential to make the operation a permanent success. It is also necessary to be guarded against tying the sutures so tight as to cut through the peritoneum and the substance of the kidney. Either of these conditions, however, can be avoided by care on the part of the operator. After properly tying the sutures, the abdominal wound is closed in the ordinary manner. The anchor is allowed to remain from ten days or two weeks. At the end of this time adhesions are formed sufficiently wrong to hold the kidney in place when the anchor is removed, and in two weeks more the patient will be able to leave the hospital. The advantages claimed for this operation are simplicity, rapidity, and efficiency. The operation is practically bloodless. There is no danger io injuring the abdominal viscera. It is easily performed, and the results so far are certainly very satisfactory, as illustrated by the case with which the author concludes his paper.—*The Therapeutic Gazette.*

PRESENCE OF MIND.—If we were asked what single quality more than any other conduces to success in medical practice, we should be disposed to say presence of mind. The doctor must be master of himself, not only "though china fall," but though he discovers that he has been studying the pathological changes in a glass eye, or feeling his own pulse like the intoxicated physician of the legend. Swift, in his "Diary to Stella," speaks of the frequency with which people "reason wrongly at first thinking." Medical men are no more exempt from this infirmity than the rest of mankind; but the carefully-cultivated presence of mind, which is the first law of professional self-preservation, generally makes them more successful in concealing it. The young practitioner often gives himself away by offering the first muddy stirrings of his thoughts as an opinion instead of waiting for it to settle. Every one remembers the young doctor in one of Wendell Homes' books, who tells his first patient that he has discovered various complicated murmurs in his heart, which turn out to be the buzzing of a

fly in the stethoscope. An older hand might have heard the "murmurs"—perhaps with his ear at the wrong end of the stethoscope—but he certainly would not so artlessly have taken the patient into his confidence. We have known a "colored person" diagnosed offhand to be suffering from Addison's disease; and a dark spot, which subsequently proved to be amenable to simple treatment by soap and water, pronounced "at first thinking" to be melanotic sarcoma. Absurd mistakes are often due to nervousness rather than precipitancy. Students attending their first midwifery case, sometimes go astray in making the necessary examination. Shyness has made a young practitioner mistake an india-rubber bag for an ovarian cyst. Perhaps the most appalling misadventure of this kind befell the physician of the Emperor Rudolph the Second, who, in trying to feel his illustrious patient's pulse under the bed-clothes, grasped a different part of the Imperial anatomy, and was informed of his mistake by his Majesty in the following dignified words:—*Erras, amice, hoc est nostrum imperaile membrum.* How the doctor got out of his embarrasing position is not recorded, but presence of mind will often save an apparently hopeless situation. If a student who finds himself exploring the rectum instead of the vagina, will calmly rebuke the patient for not paying more attention to the condition of her bowels, he will change an imminent defeat into victory. Coolness will extricate a man from almost any difficulty. We have heard a story of a distinguished surgeon who began to amputate the body from a limb, and when his attention was called to the fact, carried it off by telling the assistant to take his hand out of the way. Danton's maxim *De l'audace* finds its application in medical practice under such circumstances. The possession of this quality is the secret of success of many second-rate men, and the lack of it accounts for the failure of many otherwise admirably equipped.—*British Med. Journal.*

Professor Brouardel on the Medical Profession.—One of the great questions of the day undoubtedly is, What shall we do with our sons? In the profession with which we are more immediately concerned there are at the present moment close on 33,000 gentlemen with British qualifications practising the science and art of medicine in all parts of the world, but chiefly within the narrow limits of our own small islands. The plethora of *alumni* in our schools is truly alarming, and yet we have cause to congratulate ourselves that matters in this respect are not so bad with us as they are elsewhere. In the United States, for instance, the medical student roster last year was said to contain no fewer than 38,850 names, being an augmentation of more than 5500 since 1892. In France the overcrowding of the medical schools is also excessive, but in this connection we cannot do better than quote the remarks delivered by Professor Brouardel at a recent meeting of the Association des Médecins du Département de la Seine: "Two years ago I drew your attention to the fact that the number of medical students was increasing rapidly. The augmentation still continues unabated. In all the French faculties our future *confrères* are now twice as numerous as they were ten years ago. The same kind of thing is going on in Germany and likewise in England. Various causes have been invoked in explanation of this state of affairs; many people thought that the law regulating military service was to blame in the matter. There is no reason whatever for this supposition. The laws have not been altered in Germany or in England, and yet the rate of progression remains the same. In France the female midwifery candidates, who have nothing to do with military service, have doubled their numbers in the last five years. For my part I am convinced that it is the publicity accorded to the achievements of science which is responsible for the illusory ideas entertained by heads of families. Day by day in their newspapers they see the great importance that on all sides is attached to public health, civil and military, and logically enough imagine that the persons charged with the solution of the great problems involved receive a proportionate compensation. They conclude that their offspring will derive both honor and profit while pursuing this grand career. They would be much astonished if anyone were to point out how the efforts we make to render houses wholesome, to root out epidemics, to improve medical charities, all have the effect of narrowing more and more the field wherein the medical man was formerly wont to garner a meagre harvest. Now, in ten years' time the number of reapers will have doubled. I do not want to forecast the consequences from the point of view of medical practice, but there is one thing of which we may be perfectly sure: if the number of medical men has doubled, the number of unsuccessful practitioners will have increased threefold." The eminent French sanitarian doubtless correctly estimates the motives that induce his fellow countrymen to enter their sons in medicine. All communities are alike and, although many-headed, are not endowed with a corresponding amount of intelligence. And yet it is difficult to conceive how any reasoning being can suppose that the average medical man's life is either an easy or a lucrative one. There is no other profession or calling in which the hours are so long. A busy practitioner (and if he has to live by his labor he is compelled to be busy) must remain on duty twenty-four hours out of the twenty-four. At no period of the day does the happy moment arrive when he can put his business on one side

and say, "Now I may enjoy myself." Professor Brouardel's remarks regarding the way medical men cut the ground from under their own feet, as it were, by their persistent endeavors to improve the sanitary condition and general health of the community are very pertinent and should be widely disseminated. In no other walk of life do we hear of men who, as a matter of course and without the smallest fuss, are ready and willing to act in a manner that is diametrically opposed to their pecuniary interests.—*Lancet.*

THE USE OF COCAINE TO PREVENT RESPIRATORY DISTURBANCES DURING CHLOROFORMIZATION,—It is quite possible that others have been struck by the ease with which a patient whose tonsils and post-nasum have been penciled with a solution of cocaine previous to the use of chloroform takes the anæsthetic. For some time I have practised this use of cocaine for tonsillotomy and removal of adenoids after having noticed the comparative freedom from hæmorrhage in a case where I attempted, but without success, to operate under cocaine alone, and had to give a general anæsthetic. In this case the tonsils were removed with very little hæmorrhage indeed, and I was able at once to remove the adenoids unhampered by hæmorrhage from the tonsillar stumps. Apart altogether from the fact that cocaine thus used eases the subsequent use of chloroform (or ether), this circumstance of the freedom from hæmorrhage in an operation (tonsillotomy), where such is always dreaded, ought to be freely observed. Before the action of the cocaine is over the patient is already conscious, and ice can be employed to prolong its effect. I should say that the cocaine, which need only be applied in weak solutions (two per cent.), reduces the loss of blood in the double operation of removal of tonsils and adenoids by over fifty per cent.

Rosenberg, of Berlin, has recently drawn attention to the fact that if the mucous membranes of the upper air-passages are anæsthetized by cocaine before the administration of chloroform, the disturbances consequent upon their irritation are obviated. This author has found by experiments that at the beginning of anæsthesia if the blood pressure be considered as equal to 100, the systole is represented by 210, and the diastole by 40. Under normal conditions, on the contrary, the blood pressure being the same, the systole is represented by 110, and the diastole by 90. These modifications are due to respiratory disturbances consequent upon irritation by the chloroform of the mucous membranes of the upper air-passages. In two or three cases of my own where this combination of general and local anæsthesia has been employed, less chloroform has apparently been used, and the patient went under with less struggling and fright, and more quickly. In strabismus operations cocaine furnished a field free from hæmorrhage, but as it abolishes sensation in the conjunctivita, it might prove embarrassing to the chloroformist.—William Robertson, M.D., in *Brit. Med. Jour.*

A NOTE ON A SIMPLE MANNER OF OVERCOMING THE CATARRH CONSEQUENT ON THE ADMINISTRATION OF POTASSIUM IODIDE.—I have often observed that patients taking iodide of potassium suffered in a marked degree from "iodism," the chief symptoms being coryza with a sometimes profuse discharge, sneezing, pains over the frontal sinuses, swelling of any part of the mucous membrane of the mouth, and a sense of heat in the chest. The foregoing phenomena are identical with those attendant upon the inhalation of free iodine (Mitchell Bruce), and it has been observed that one is more likely to be attacked with catarrh if the iodide of potassium contains free iodine as an impurity. This seems to justify the belief that the catarrh of iodism is due either to iodine being secreted by the salivary glands, or to the circumstance that iodide of potassium is broken up in the mouth after its secretion and free iodine liberated. The latter view is supported by Schmeideburg, who has proved that iodide of potassium in the presence of carbonic acid is decomposed, the latter being abundant in the expired air in the region of the salivary glands. Whilst taking charge of Dr. Herschell's out-patients at the National Hospital for Diseases of the Heart, I have been able to stop the catarrh in three well-marked cases by adding to the mixture (being in each case ten grains of iodide of potassium and half an ounce of water) five minims per dose of tincture of belladonna, my object being to reduce the salivary secretion, and in each case the result was satisfactory. Any antisialagogue would doubtless have a similar effect, but belladonna is, in my opinion, the most useful, as it can easily be given in the form of a mixture with the iodide, and in the small dose that is used in such cases, it counterbalances the so-called "depressant" action of the potassium.—George Cohen, M.B., *Lancet.*

OPEN-AIR TREATMENT OF WHOOPING-COUGH.—Ullmann, after pointing out the failure of all suggested "specifics" for whooping-cough, and the little effect which drugs of any kind have on the frequency or the severity of the paroxysms of cough or the duration of the disease, proceeds to urge (*Jahrb. f. Kinderheilkde*, Bd. xl. H. i., S. 39) the value of open air (*freiluftcur*). He relies chiefly on the consideration that under ordinary circumstances the patients have fewer paroxysms during the hours in which they are out of doors. To establish this he quotes records of the paroxysms in certain cases. Thus, in one case, while indoors, the child (aged 18 months) had a paroxysm on an

average every 48 minutes, while out of doors it had one every 91 minutes. In another severe case the child had nearly three times (2.74 : 1) as many paroxysms indoors as out of doors. In a mild case the difference was less (1.4 : 1). The difference in all the cases varied on different days, but it was on the whole sufficiently marked to strike and convert the parents, at first disposed to distrust the advice given. He states that a threatening paroxysm may be arrested sometimes when in the house by carrying the child to an open window, where it takes several deep inspirations, and the feeling of distress and anxiety which precedes the paroxysm passes off. Ullmann recommends that in summer and on fine days in winter the patients should be kept out of doors—not for a few hours only, but from morning to evening. He attaches much importance to their being given their meals out of doors. The paroxysm of cough and vomiting which so commonly follow a meal is thus in many instances avoided, and the serious deterioration of general nutrition liable thus to be produced is prevented. He does not look on bronchitis or even broncho-pneumonia as a contra-indication of the open-air cure.—*Brit. Med. Jour.*

Self-Poisoning by Chloroform.—Few practices are at once more pernicious and more common than auto-intoxication by means of chloroform. Within a few days two persons have done themselves to death by inhaling chloroform. Mr. F. C. Banks, as a result of a poisoned wound inflicted by pricking his finger with a toothpick, suffered great pain It appears from the evidence of his wife that he inhaled chloroform to obtain relief. It is almost incredible that this man had for eighteen months received regularly daily at his house two ounces of chloroform for auto-intoxication. He poured a small quantity upon a paper cone and inhaled it. The wife awakened to find unfortunate man comatose and sterterous, and from this state he never recovered. It seems to us perfectly monstrous that the victim should ever have had the chloroform supplied to him. The laity know so little of the perils of inhaling anæsthetics that they ought to be protected from themselves and others equally incompetent to administer the drug. In the second case, a young surgeon, Mr. T. G. Sloan, of West Calder, suffering from neuralgia and sciatica, inhaled chloroform to secure sleep and forgetfulness of his pains. While comatose he appears to have fallen forward and so inhaled a lethal dose and died. Thus two lives are sacrificed to a reckless use of one of the most beneficent drugs given to man to assuage those ills to which flesh is heir.—*Lancet.*

A Case of Sulfonal Poisoning in a Dipsomaniac.—A married woman, aged thirty-seven, separated from her husband owing to her habits of intemperance, had been abstemious under moral restraint for about three months, when, on May 24th, 1895, she showed signs of an approaching attack of alcoholism. She was watched carefully for a time, but owing to illness and removal of her attendant she was left in charge of a maid. Her first dose, on June 1st, was about one pint and a half of methylated spirit, partly procured from a lamp in the house; then two-pennyworth of the same was obtained from a lamp shop (about six ounces), the druggists in the district having received notice not to serve her; thereupon, her thirst seemed to be so extreme that she resorted to some painters, from whose can of turpentine she took a drink. She next discovered a bottle containing 100 tabloids of sulphonal, containing five grains in each, which had previously been taken from her; and which she had received by post; these she chewed up in her mouth one after another till she had swallowed fifty-three (equal to 265 gr.) About 5 p.m. the same day she was found by the maid (who had unfortunately been obliged, owing to domestic duties, to leave her a great deal to herself) in a state of stupor on the floor, and was carried to bed. At 11.15 p.m. I was summoned to her and found her sleeping on her side with her knees drawn up and the pupils slightly contracted and insensible to light. When roused she smiled graciously and lapsed off to sleep again; she tried once to raise herself in bed, when she fell powerlessly back again. Next day the legs were found to be extended, and the soles of the feet were arched in a state of extreme flexion. The bowels were confined. She slept from 5 p.m. on June 1st till 5 a.m. on the 4th—sixty hours—and did not regain speech till the 7th and the power of locomotion till the 8th. This case is interesting as showing the irritation produced to the plantar branches of the post-tibial nerve—presumably by the sulphonal—and the long period that elapsed before the toxic flexion of the soles made itself manifest, thus showing the slowness of the action of the drug.—*The Lancet.*

Fracture of the Femur from Muscular Action.—Dr. Irving S. Haynes reported the case of J. W., an athlete, thirty-six years of age, who, while bowling, had attempted to throw a heavy ball, in doing so had lost his equilibrium, and, in endeavoring to regain it, had brought such a strain upon the left femur as to fracture it in the middle. The line of the fracture had extended slightly obliquely from above and inward, downward and outward. He had been in unusually robust health, and had been free from any specific disease: hence the manner in which the fracture had been produced was of unusual interest.

Dr. J. W. S. Gouley recalled the case of a healthy young man, under thirty years of age,

who, while endeavoring to hurl a ten-pound dumb-bell to a considerable distance, had thrown back his right arm so far that it was beyond the control of certain muscles, with the result that the humerus had snapped just below the deltoid insertion. Of course, in this case the weight of the dumb-bell had been a decided factor in addition to the muscular action. The fracture had united satisfactorily. No disease of the bone had been found, although the speaker said that when fracture occurred in this way he was usually suspicious of the existence of malignant disease of the bone. It was not uncommon for fractures of bone to occur from very slight causes, such as movements in bed, where there was malignant disease of the bone.—*N. Y. Med. Jour.*

A New Sign of Death from Exposure to Cold.—In the *Wiener medizinische Blätter* for July 11th, there is an abstract of an article published in the *Journal für öffentlicher Hygiene, gerichtlicher und praktischer Medizen* for March, by Dr. S. Wischnewski, who has made post-mortem examinations of forty-four frozen persons. In forty instances he found hæmorrhages on the mucous membrane of the stomach. These hæmorrhages looked like little spots somewhat raised above the surface of the mucous membrane. They were round or oval in shape, of a dusky or blackish color, and reached the size of a pea. They varied in number from five to a hundred in individual cases. In cases where the person had died from some other cause, and then the body had been frozen, the author did not find these hæmorrhages. The appearance of the hæmorrhages was not affected by the condition of the stomach in regard to being full or empty. By way of test experiments the author froze rats and guinea-pigs, and found the same hæmorrhages as in man, but in cats and young dogs frozen to death he did not observe them, but only a general hyperæmia of the gastric mucous membrane. The author considers this sign of medico-legal importance, as significant of death from exposure to cold.

Removal of a Piece of Pyloric Mucous Membrane by the Stomach-Tube.—Ebstein (*Berliner klin. Wochenschrift*, 1895, No. 4) reports a case in which this accident happened, the fragment being found in the fenestrum of the tube. The case was one of chronic peritonitis with strictures and dilatations of the duodenum. Death occurred from septic peritonitis four days after a laparotomy. Neither loss of tissue nor cicatrix could be found in the stomach. Ebstein thinks this accident much more frequent than is usually believed. Position and size of the stomach, and, as in the case reported, adhesion with neighboring organs, favor the occurrence. The author advises distention before passing the sound in order to be able to form an idea of the extent and configuration of the stomach. The sound must be sufficiently thin; must not be removed too rapidly, but slowly, and while water is allowed to run in. The occurrence of vomiting while the tube is in the stomach necessitates special caution. —*Am. Jour. Med. Sci.*

Rules as to Time of Rupturing the Amniotic Sac in Labor.—1. In multipara, rupture when os is fully dilated.

2. In primipara, delay until the small parts are also dilated.

3. In cases of face and breech presentation, delay in rupturing the sac is best.

4. Where the pelvis is small, and the fœtus large, delay rupturing.

5. In premature labor, with dead fœtus, rupture early.

6. Rupture the sac early when the membranes are unusually thick, tough and unyielding.

7. When speedy delivery is demanded, rupture early and dilate with the fingers.

8. Rupture the sac when an excessive amount of amniotic fluid retards labor.

9. When version is necessary, and can be accomplished by bimanual manipulation, perform this operation before rupturing.

10. Remember that a dry labor is always to be deprecated, hence do not rupture at all, unless for good reasons, and the case demands it.—*Times and Reg.*

Mercury in Meningitis.—Mercury is an agent of unrivalled excellence, judiciously administered; in inflammatory conditions of the fibro-serous-membranes. On the meninges, it acts with especial energy; therefore, why, in those cases of cranial trauma, a purgative dose of calomel is given early, and repeated later, should symptoms of meningeal trouble threaten; the dose of the drug being so apportioned as to promptly secure its full therapeutic effect, without its possible lethal action.

Absorption by the Rectum.—Posner (*Ber. über die Verh. des* 13 *Congress für innere Med.*) has made some observations showing the rapidity of absorption of certain substances by the rectum. Certain solutions, like indigo-carmine, methylene-blue, etc., injected into the rectum appear within fifteen minutes in the bile and urine. Other substances, such as naphthol green B, were not absorbed at all. The experiments confirm early observations as to the importance of the rectum in absorbing remedies or poisons, and led von Noorden to recommend anew the use of quinine suppositories in whooping cough.—*Am. Jour. Med. Sci.*

THE CANADA LANCET

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* Dr. J. L. Davison, 12 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Letters and Remittances to be addressed to* Arthur A. Adams, Gen. Business Manager, 11 Colborne Street, Toronto.

AGENTS.—Dawson Bros., Montreal; J. & A. McMillan, St. John, N.B.; Canadian Advertising Agency, 60 Watling St London. 5 Rue de la Bourse, Paris.

TORONTO, SEPTEMBER, 1895.

Editorial.

SEASONABLE SKIN DISEASES.

At this season of the year one is rather more than usually apt to be faced in practice with acute skin-lesions, and not the least frequently occurring just now is that of the Exudations, of which nettle-rash is a typical member. Of course the inflammations come under this large class, whatever may be their cause, heat, bites and stings of insects, the use of fresh or green fruit, or other new and unusual additions to the year's dietary which this season brings, or the gastric and intestinal disturbances peculiar to the season of the fiery Sirius.

Disorders of secretion and of excretion are not so common, except in so far as they affect the sweat glands, hyperidrosis and chromidrosis and the accompanying intertrigo, being frequently seen. The hæmorrhages, the hypertrophies, the atrophies, the tumors, the neuroses, the parasitic affections, are all more apt to pursue the even tenor of their way uninfluenced by the season. Some of the atrophies, such as vitiligo, are, of course, more apt to be a cause of trouble, from the tanning of the hands and face, which so accentuates the unpigmented area, and brings it into evidence against the unguarded practitioner (in the writer's experience always a homœopath) who, in the late autumn promised a positive cure when the patient was driven to him for cosmetic reasons after her summer in the garden, and found that in the darker season of winter the patches faded, only to be as sharply contrasted as ever when the sun got at them in the spring again.

A disease somewhat in fashion a few weeks ago, especially among boys and young men "of the baser sort," was a peculiar exudation, in gross appearance very erysipelatous, but not advancing by the finger-like projections along the lymphatic areas of the skin seen in the latter affection, but with even border, raised, red, and œdematous, like erysipelas, but without the burning and tensive pain. Constitutional disturbance was absent, but patients and friends were alarmed at the gradual disfigurement of feature, closing up of eyes, distortion of the nose and mouth, produced by the œdema. Two cases of this the writer saw, about the same time, in June, and each was attributable, without any doubt, to the same cause. The patients, though living in widely different parts of the city, and not acquainted with each other, belonged to the army of boys who spend the most of the day, when the swimming season opens, in the green waters of the Don, and where the sun could get at the skin, especially where the hair could constantly, by its dripping, keep the skin alternately moist and dry, some of the infective bacteria of the filthy water had evidently found a suitable nidus, and set up an œdema of the skin, not accompanied by severe inflammation, and marked by no constitutional disturbance. It was a form of *Dermatitis venenata*, not due to poison ivy, not erysipelas, and not sunburn.

Several cases of urticaria have lately been brought under the writer's notice, due mainly to the ordinary cause, absorption from the intestinal canal. As to etiology, the authorities seem agreed that this is the first cause in the order of frequency, and that nervous depression or worry, comes next, then disease of the pelvic viscera, the latter being as frequently as any other, perhaps, the cause of chronic urticaria. The management of these cases, the cause being once intelligently determined, is theoretically simple enough. If digestive disturbance co-exist, give purgatives, and in very acute even cases an emetic is of much service, if the ingestion of the irritant be very recent. The empirical reputation of alkalines and salines in such diseases is probably due to a neutralizing influence upon the toxines in the alimentary canal, if not actually upon those already in the blood, and they

who, while endeavoring to hurl a ten-pound dumb-bell to a considerable distance, had thrown back his right arm so far that it was beyond the control of certain muscles, with the result that the humerus had snapped just below the deltoid insertion. Of course, in this case the weight of the dumb-bell had been a decided factor in addition to the muscular action. The fracture had united satisfactorily. No disease of the bone had been found, although the speaker said that when fracture occurred in this way he was usually suspicious of the existence of malignant disease of the bone. It was not uncommon for fractures of bone to occur from very slight causes, such as movements in bed, where there was malignant disease of the bone.—*N. Y. Med. Jour.*

A NEW SIGN OF DEATH FROM EXPOSURE TO COLD.—In the *Wiener medizinische Blätter* for July 11th, there is an abstract of an article published in the *Journal für öffentlicher Hygiene, gerichtlicher und praktischer Medizen* for March, by Dr. S. Wischnewski, who has made post-mortem examinations of forty-four frozen persons. In forty instances he found hæmorrhages on the mucous membrane of the stomach. These hæmorrhages looked like little spots somewhat raised above the surface of the mucous membrane. They were round or oval in shape, of a dusky or blackish color, and reached the size of a pea. They varied in number from five to a hundred in individual cases. In cases where the person had died from some other cause, and then the body had been frozen, the author did not find these hæmorrhages. The appearance of the hæmorrhages was not affected by the condition of the stomach in regard to being full or empty. By way of test experiments the author froze rats and guinea-pigs, and found the same hæmorrhages as in man, but in cats and young dogs frozen to death he did not observe them, but only a general hyperæmia of the gastric mucous membrane. The author considers this sign of medico-legal importance, as significant of death from exposure to cold.

REMOVAL OF A PIECE OF PYLORIC MUCOUS MEMBRANE BY THE STOMACH-TUBE.—Ebstein (*Berliner klin. Wochenschrift*, 1895, No. 4) reports a case in which this accident happened, the fragment being found in the fenestrum of the tube. The case was one of chronic peritonitis with strictures and dilatations of the duodenum. Death occurred from septic peritonitis four days after a laparotomy. Neither loss of tissue nor cicatrix could be found in the stomach. Ebstein thinks this accident much more frequent than is usually believed. Position and size of the stomach, and, as in the case reported, adhesion with neighboring organs, favor the occurrence. The author advises distention before passing the sound in order to be able to form an idea of the extent and configuration of the stomach. The sound must be sufficiently thin; must not be removed too rapidly, but slowly, and while water is allowed to run in. The occurrence of vomiting while the tube is in the stomach necessitates special caution. —*Am. Jour. Med. Sci.*

RULES AS TO TIME OF RUPTURING THE AMNIOTIC SAC IN LABOR.—1. In multipara, rupture when os is fully dilated.

2. In primipara, delay until the small parts are also dilated.

3. In cases of face and breech presentation, delay in rupturing the sac is best.

4. Where the pelvis is small, and the fœtus large, delay rupturing.

5. In premature labor, with dead fœtus, rupture early.

6. Rupture the sac early when the membranes are unusually thick, tough and unyielding.

7. When speedy delivery is demanded, rupture early and dilate with the fingers.

8. Rupture the sac when an excessive amount of amniotic fluid retards labor.

9. When version is necessary, and can be accomplished by bimanual manipulation, perform this operation before rupturing.

10. Remember that a dry labor is always to be deprecated, hence do not rupture at all, unless for good reasons, and the case demands it.—*Times and Reg.*

MERCURY IN MENINGITIS.—Mercury is an agent of unrivalled excellence, judiciously administered; in inflammatory conditions of the fibro-serous-membranes. On the meninges, it acts with especial energy; therefore, why, in those cases of cranial trauma, a purgative dose of calomel is given early, and repeated later, should symptoms of meningeal trouble threaten; the dose of the drug being so apportioned as to promptly secure its full therapeutic effect, without its possible lethal action.

ABSORPTION BY THE RECTUM.—Posner (*Ber. über die Verh. des 13 Congress für innere Med.*) has made some observations showing the rapidity of absorption of certain substances by the rectum. Certain solutions, like indigo-carmine, methylene-blue, etc., injected into the rectum appear within fifteen minutes in the bile and urine. Other substances, such as naphthol green B, were not absorbed at all. The experiments confirm early observations as to the importance of the rectum in absorbing remedies or poisons, and led von Noorden to recommend anew the use of quinine suppositories in whooping cough.—*Am. Jour. Med. Sci.*

THE CANADA LANCET

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* Dr. J. L. Davison, 12 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Letters and Remittances to be addressed to* Arthur A. Adams, Gen. Business Manager, 11 Colborne Street, Toronto.

AGENTS.—Dawson Bros., Montreal; J. & A. McMillan, St. John, N.B.; Canadian Advertising Agency, 60 Watling St London. 5 Rue de la Bourse, Paris.

TORONTO, SEPTEMBER, 1895.

Editorial.

SEASONABLE SKIN DISEASES.

At this season of the year one is rather more than usually apt to be faced in practice with acute skin-lesions, and not the least frequently occurring just now is that of the Exudations, of which nettle-rash is a typical member. Of course the inflammations come under this large class, whatever may be their cause, heat, bites and stings of insects, the use of fresh or green fruit, or other new and unusual additions to the year's dietary which this season brings, or the gastric and intestinal disturbances peculiar to the season of the fiery Sirius.

Disorders of secretion and of excretion are not so common, except in so far as they affect the sweat glands, hyperidrosis and chromidrosis and the accompanying intertrigo, being frequently seen. The hæmorrhages, the hypertrophies, the atrophies, the tumors, the neuroses, the parasitic affections, are all more apt to pursue the even tenor of their way uninfluenced by the season. Some of the atrophies, such as vitiligo, are, of course, more apt to be a cause of trouble, from the tanning of the hands and face, which so accentuates the unpigmented area, and brings it into evidence against the unguarded practitioner (in the writer's experience always a homœopath) who, in the late autumn promised a positive cure when the patient was driven to him for cosmetic reasons after her summer in the garden, and found that in the darker season of winter the patches faded, only to be as sharply contrasted as ever when the sun got at them in the spring again.

A disease somewhat in fashion a few weeks ago, especially among boys and young men "of the baser sort," was a peculiar exudation, in gross appearance very erysipelatous, but not advancing by the finger-like projections along the lymphatic areas of the skin seen in the latter affection, but with even border, raised, red, and œdematous, like erysipelas, but without the burning and tensive pain. Constitutional disturbance was absent, but patients and friends were alarmed at the gradual disfigurement of feature, closing up of eyes, distortion of the nose and mouth, produced by the œdema. Two cases of this the writer saw, about the same time, in June, and each was attributable, without any doubt, to the same cause. The patients, though living in widely different parts of the city, and not acquainted with each other, belonged to the army of boys who spend the most of the day, when the swimming season opens, in the green waters of the Don, and where the sun could get at the skin, especially where the hair could constantly, by its dripping, keep the skin alternately moist and dry, some of the infective bacteria of the filthy water had evidently found a suitable nidus, and set up an œdema of the skin, not accompanied by severe inflammation, and marked by no constitutional disturbance. It was a form of *Dermatitis venenata*, not due to poison ivy, not erysipelas, and not sunburn.

Several cases of urticaria have lately been brought under the writer's notice, due mainly to the ordinary cause, absorption from the intestinal canal. As to etiology, the authorities seem agreed that this is the first cause in the order of frequency, and that nervous depression or worry, comes next, then disease of the pelvic viscera, the latter being as frequently as any other, perhaps, the cause of chronic urticaria. The management of these cases, the cause being once intelligently determined, is theoretically simple enough. If digestive disturbance co-exist, give purgatives, and in very acute even cases an emetic is of much service, if the ingestion of the irritant be very recent. The empirical reputation of alkalines and salines in such diseases is probably due to a neutralizing influence upon the toxines in the alimentary canal, if not actually upon those already in the blood, and they

seem to be of distinct value. If the writer were to be shut down to the use of one drug in this affection, it would undoubtedly be antipyrine, in 5 to 10 grain doses every four or six hours. Its action upon the violently itching and frequently recurring local lesion is often very marked, and is probably due to its effect upon the vasomotor nerves of the skin, upon disturbance of which the exudation into the corium depends. Other sedatives such as the bromides, gelsemium, bismuth, belladonna, ether, chloral, chloroform, have all been recommended, and in some cases found useful. Lassar speaks highly of sodium salicylate in 20 or 25 grain doses every two hours.

Local treatment, even if it were placebo, cannot be neglected. It is of distinct advantage however; cold water, carbolic acid lotion, one part in 20 to 60 of cold water, lotions either strongly acid, as lemon juice or vinegar and water, or strongly alkaline, are often very grateful to the patient. Sometimes ointments are better, as of camphor and chloral, with carbolic acid, ungt. aq. ros., or ceratum galeni, the ordinary benzoated oxide of zinc ointment, or 20 grains of acetanilide to the ounce of vaseline or any other ordinary excipient. Other local applications are menthol, cocaine, naphthol, belladonna, or ichthyol ointment.

The "diathesis" of the patient must be thoroughly investigated, especially if the disease is inclined to be chronic, and gout, rheumatism, or malaria if possible driven from the field. Cases benefited by quinine are probably malarial in origin. Dietetic errors, if habitual, must be pointed out and corrected. The writer cannot refrain from mentioning, before closing, a case of urticaria of the respiratory mucosa recently seen by him. A baker working in an underground bakeshop, which was lighted by gas, and probably as unhygienic as most such places are, had on three occasions been seized suddenly by a sense of itching and tightness in the respiratory passages, which lasted two or three hours and gradually passed off. On the first two occasions he consulted a physician in the city, who told him that it was due to gas poisoning, although the patient had told him that he had noticed that the attacks came each time after he had eaten some old cheese. Even this "tip" did not prevent the physician withdrawing blood from the patient, submitting it to microscopic examination, and gravely declaring that he found evidence in it of poisoning by gas; a curious instance of the possible vagaries of the human mind.

SOME CLINICAL POINTS IN DIPHTHERIA.

Diphtheria, a disease ever of great interest to the medical profession, but more so of late since the introduction of antitoxine, possesses some interesting clinical points which have not received due consideration in text books dealing with this subject.

The temperature in diphtheria is generally reported to possess nothing very characteristic and to depend entirely on the local condition, the extent and situation of the surface involved, and the character of the infection, whether simple or mixed.

This we believe to be true in so far as it goes, but on examining a number of charts of cases of all degrees of severity, we have found in a large proportion of them (about sixty-five per cent.) a secondary rise of temperature, occurring at about the end of the first week of the disease.

The patients were generally admitted to the hospital on or about the second or third day of the disease, with temperature varying from 99° to 104°, the average being about 101°. During the first three or four days subsequent to admission the temperature gradually fell to normal or nearly so, providing no complication existed to disturb the natural course of events, and then after remaining stationary for from twenty-four to thirty-six or forty-eight hours, rose suddenly to a point varying from 100° to 103°, falling to normal again in from one to three days. A peculiar feature noticed in connection with this secondary rise was, that of four patients whose temperatures reached 102° or over, three died from "heart-failure."

No constant relation appeared to exist between the height of the primary and secondary fevers. So far as could be discovered, no special local or general condition was constantly present during this rise. In some the throat was clean, so far as could be seen, in others membrane was still present; the cervial glands were sometimes much enlarged, in others they were small; constipation occasionally existed, but more frequently the bowels were in good condition; and the patients, as a rule, beyond some malaise with slight anorexia, seemed but little affected by the recurrence of the fever.

If it is a fact that in diphtheria there is a characteristic secondary rise of temperature in a large percentage of the cases about the end of the first week of the disease, it will prove helpful in those cases of angina in which one is unable definitely to say that diphtheria does or does not exist, and when a bacteriological examination of the discharges cannot be obtained.

As mentioned above three out of the four cases whose secondary fever was high, died of "heart failure."

Just a word on the premonitory symptoms of that most terrible of all complications of this deadly disease.

In many cases death is so sudden as to preclude the possibility of premonitions, or supervenes so rapidly after their appearance that no time is given for action; but, in a very large proportion of the cases, there are distinct premonitory signs, which give us sufficient warning and time to endeavor to afford relief and to call the friends and prepare them for the almost inevitable sad result.

The combination of events to which we wish to direct attention is *an acute pain in the epigastric region combined with vomiting* and a feeble pulse. So general is this combination, that the nurses in charge of diphtheria wards have learned to regard such cases as almost necessarily fatal.

Of several cases we have observed in which these signs presented themselves, only two recovered, and one of these was confined to bed for some weeks, owing to the weak condition of the heart, while the other's trouble was explained by the existence of obstinate constipation, and disappeared on the successful exhibition of a purgative.

The time at which the fatal result ensued, varied. The shortest was about half an hour; the longest several weeks; the average from three to twelve hours after the warning.

With regard to treatment there is little to add to what is usually found in text-books and adopted.

The liability of stimulants given by the mouth to provoke the continuance of vomiting, renders it an undesirable method of administration.

If retained by the bowel give your alcohol *per rectum*, or if not, along with the strychnia, digitalis, etc., hypodermically.

Nourishment in the form of raw eggs and peptonized milk *per rectum*, or by the mouth, if tolerated, should be given in small quantities, freqently repeated. Mustard poultices to the epigastrum do much to relieve pain, while a smart purge removed the symptoms entirely in one case and seemed to afford some relief in others.

A patient having once presented these symptoms during an attack of diphtheria, should be most rigidly kept in the horizontal position for a much longer time than would otherwise be done, and by the administration of tonics, etc., and the exercise of due caution for some time after rising; the danger reduced to a minimum.

"AN OVERCROWDED PROFESSION."

There can be no doubt that the profession of medicine has become terribly overcrowded in Ontario, notwithstanding the raising of the standard of matriculation by the Col. of Phys. and Surg. Each successive effort made to discourage candidates for the magic M.D., succeeding only in filling the halls of the Medical Colleges with an increased number of school teachers and farmers' sons, who imagine that the profession must have a "good thing" that they are trying to keep others away from.

Viewed from every standpoint the future of medicine as a means of making a living is a black one indeed, and there can be no doubt that every man enters medicine with that end in view, apart from any view of a philanthrophic nature, for every man must live, and in a new country such as ours, there are very few who have had the good luck to have a large enough fortune to enable them to use medicine as a means to an end in furthering scientific research.

In former days, in Canada at least, the doctor had a very much higher standing in the community than at the present time when education is so cheap and so common that the professional ranks are filled with men who have no real qualifications for this calling other than the parchment containing their easily won degree.

The proportion of medical men to the population at large in Ontario, is about 1 to 600, and steadily getting worse. In Toronto it is even greater, so then any one can see that there would not be a living if practice was equally divided among the practitioners, and we know that some of them have quite large incomes, though they are

few, the great majority barely paying their running expenses, and many not even that.

Each year sanitary science is making greater strides, lessening the number of epidemics, and thereby the medical incomes. Lodge practice is sapping the vitality and the self-respect of the men who are forced by circumstances, "as they say," to engage in it. The oculists have keen competitors from opticians styling themselves "Doctors of Refraction." Instrument makers fit trusses and splints of all kinds, and the Council seems without the power to prevent in any way the practice of medicine, for such it is, by these men, who frequently make fortunes or a splendid living when the unfortunate M.D. struggles along with a bare existence.

The principle reason of this overcrowding is the idea, so common among the laity, that medicine offers a safe and easy means of making a fortune. On every hand one meets with people who say, "Oh, you doctors make lots of money," and really believe that such is the case. The country school teacher sees the local doctor flying around at all times, driving here and there, wearing out his life for scant remuneration, imagines he must be making lots of money, and starts off with great hopes, and a few hundred dollars, to the nearest college and becomes one more victim to misplaced ambition. The writer met recently, a dentist with an income of $4,000 a year from his practice, who proposed to go into medicine, alleging that as a dental surgeon his social position was not good enough. I informed him that the presence of an M.D., would be of little avail in Toronto, that other qualifications were necessary, and that doctors did not become society men, unless they possessed leisure, wealth, and connection, as is the case with all other professional or business men.

It is dificult to indicate any remedy for this over-crowding, except by a gradual education of the public to the fact that the profession of medicine contains more starving or semi-starving members than almost any calling whatsoever, and we witness the spectacle, which will be common enough before many years have passed, of hundreds of possessors of medical degrees forced into merchantile or agricultural pursuits in order to make a living.

ASYLUM DISTRICTS.

From the frequent inquiries addressed to the superintendents of the several asylums by medical practitioners in the province who are interested in having patients admitted, it would appear that the recent changes made in the districts allotted to the respective asylums are not generally known by the profession. Often delay and annoyance has resulted to medical men in consequence of the new arrangement of the districts. We have been requested by the Inspector of Asylums to draw special attention to this new arrangement, and in the hope of benefiting those who may have occasion to send patients to the asylum, we quote from his last report the following allotment of the districts which are now attached to each asylum :—

No. 1.—London District, to embrace the counties of Essex, Kent, Elgin, Lambton, Middlesex, Oxford, Huron, Bruce and Perth, these having a combined population of 540,839, for which there is provision in the District Asylum for 1 patient to every 537 inhabitants.

No. 2.—Hamilton District, to embrace the counties of Halton, Wentworth, Lincoln, Haldimand, Norfolk, Brant, Wellington, Waterloo, Dufferin and Grey, having an aggregate population of 454,043, for which there is accommodation in the District Asylum for 1 patient to every 493 of the population.

No. 3.—Mimico District Asylum, to embrace the counties of Peel, Simcoe, Ontario, Victoria, Peterborough, and the Districts of Muskoka, Parry Sound, Nipissing, Algoma, Thunder Bay and Rainy River, having an aggregate population of 318,728, for which there is accommodation in the District Asylum for 1 patient to every 569 of the inhabitants.

No. 4.—Toronto District, to embrace the city of Toronto and county of York, having an aggregate population of 245,101, for which there is accommodation in the District Institution for 1 patient to every 518 of the inhabitants.

No. 5.—Kingston Asylum District, to embrace the counties of Durham, Northumberland, Hastings, Lennox, Addington, Prince Edward, Frontenac and Renfrew, having an aggregate population of 267,170, for which there is accommodation in the District Institution for 1 patient to every 477 of the inhabitants.

No. 6.—Brockville Asylum District, to embrace the counties of Leeds, Grenville, Dundas, Stormont, Glengarry, Prescott, Russell, Carleton and Lanark, having an aggregate population of 288,440, for which there is accommodation in the District Asylum for 1 patient to every 487 of the inhabitants.

The territorial district allotted as No. 4, or Toronto, may appear at first sight to be comparatively small, but it must be borne in mind that, in the higher pay wards, there is accommodation for 230 patients, which leaves only 478 beds available for warrent cases. The higher pay wards are available for patients from all sections of the province, and are not limited to any territorial division, from which they may be admitted.

Abscess of Lung Treated by Drainage and Iodoform; Recovery.—J. Eustace Webb, M.B., Aberd., *Lancet*, June 29, 1895, gives the following important contribution to our literature on the surgery of the lung.

A woman aged twenty-seven years came under the care of my partner, Mr. Wm. Hammond, and myself on Aug. 1st, 1894. She had given up all hope of recovery, as she had been told by two medical men that she could not live many weeks. Her mother died of lung disease at the age of thirty-two, and on the maternal side there was a decided history of phthisis. Her father was aged fifty-eight; he suffered from rheumatic gout. She had no brothers or sisters. She had inflammation of the lungs in early childhood, since which time she had been perfectly well. In the latter part of June, 1894, she was suddenly attacked, at the time of her menstrual period, with pain in the right side of the chest, which was followed by cough and expectoration. When examined on Aug. 1st, the right chest gave the following physical signs: Great dulness, extending all over the base of the lung posteriorly to a line well above the angle of the scapula, and at the side and anterior part of the chest below a line continued horizontally round from the ensiform cartilage; vocal resonance and fremitus were present, but not markedly increased; the breath sounds were distant, but heard to the extreme base. The tape at the level of the ensiform cartilage showed an increase of one inch on the right side. The breath was fetid, had the characteristic odour of pus, and the air of the whole cottage was pervaded with the same sickly odour. The expectoration was purulent and nummular. The body was fairly well nourished, but she stated that she was losing flesh rapidly. Her pulse was 120, her temperature 102° F., and her respiration 30. Her appetite was very bad, and the tongue was red and glazed. As she lived six miles from my house a record of her temperature, etc., could only be taken once daily. On Aug. 9th the chest was aspirated in the axillary line in the sixth intercostal space; the needle penetrated to a depth of two and a half inches, and twelve ounces of pus, slightly mixed with froth, were drawn off. For some days after the operation she appeared greatly relieved, the fetor of the breath was very much diminished, aud she was able to relish her food. No marked improvement, however, was noted in her pulse, temperature, or respiration; the breath sounds could be heard more distinctly at the base, but there was no appreciable diminution in the dulness. On Aug. 25th she vomited about half a pint of pus, and again the fetor of the breath became less. The physical signs suggesting an increased collection of pus then became more marked, the dulness extending to above the middle of the scapula behind and to a corresponding level in the side and anterior part of the chest. She was losing flesh rapidly. Her respiration was 40, the pulse was 120 and very soft, and she was passing loose evacuations many times in the day. On Sept. 2nd a large trocar and canula, the size of a No. 14 English catheter, was passed through the chest-wall into the lung just above the angle of the scapula, and between it and the vertebral column it was directed forwards and outwards. This spot was chosen because it seemed to be that of the maximum density. When the trocar was withdrawn, a flow of pus through the canula continued until fourteen ounces were collected. A drainage-tube six inches long was then passed through the canula into the abscess cavity, the canula was withdrawn, the drainage-tube was secured to the skin with thread and sticking plaster, and covered with a thick absorbent dressing. Each day the dressings were changed, and at first they were always found saturated with discharge. During the dressings the patient was brought to the edge of the bed in the dorsal

recumbent position and directed to cough; by this means many ounces of pus were discharged. After the fourth day the drainage-tube was replaced by one considerably larger in calibre; this was removed daily, and after cleansing was filled with powdered iodoform, re-introduced, and blown clear into the abscess cavity. On Sept. 17th an etherial solution of iodoform was injected through the tube into the cavity, a proceeding which almost caused death, for the glottis was thrown into spasm, and the odour of ether was very strongly perceptible in the breath. From this date she improved in a marked manner, and on Sept. 24th the discharge had practically ceased. From Sept. 2nd she took one grain of iodoform in pill every four hours, and continued to do so until her removal to the convalescent home. On Sept. 24th the measurement of the chest showed a decrease of two inches on the right side at the level of the ensiform cartilage. On Oct. 6th she complained of pain in the front of the chest, and a tender spot was exhibited in the fifth interspace immediately below the nipple. On the 9th, as there was evidence of fluctuation at this point, an incision was made through which dressing forceps were passed and opened, when a large quantity of pus came away. A drainage-tube was then introduced, filled with iodoform, as before described. In a few days the sinus closed. On Dec. 1st there was a difference of three and a half inches in the measurements of the two sides. Tho temperature was then 99°, the pulse 100, and the respiration 40 a minute. She was removed to St. Michael's Home near Brent on Dec. 6th, 1894, and there made an uninterrupted recovery. On March 8th the right side of the chest measured three inches and three quarters less than the left at the level of the ensiform cartilage. The whole of the lower lobe of the right lung appeared to be solid, the percussion note was absolutely dull, and no breath sounds could be detected. On March 19, 1895, she returned to her old situation, having gained over two stone in weight since Dec. 1st. She said she felt perfectly well.

AN ORIGINAL DOCTOR.—The *N. Y. Med. Rec.* gives the following account of a quaint and original doctor located in one of the islands of Puget Sound. He advertises in posters and placards printed in a home outfit. In one of his announcements he says: "Legs and arms sawed off while you wate without pane. Childbirth and tumors a specialty. No odds asked in measles, hooping cough, mumps or diarrear. Bald head, bunions, corns, warts, cancer and ingrowing tow nales treated scientifically. Coleck, cramps, costiveness, and worms nailed on sight. Wringworms, pole evil, shingles, moles, and cross eye cured in one treatment or no pay. Private diseases of man, woman or beast eradicated. P. S. Terms invariably in advance. No cure, no pay. P. S. (Take Notis.) No coroner never yet sot on the remanes of my customers, and enny one hiring me doan't haf to be good layin' up money to buy a gravestone. Come won, come awl."

This man is said to do a good business, although you would not expect it, and his patients say he cures disease, and does it thoroughly and quickly.

TESTING FOR SUGAR.—In Dr. S. Solis-Cohen's clinic, *Coll. and Clin. Record*, Boettger's bismuth test is first employed, equal parts of urine and officinal liquor potassæ to which a pinch of bismuth subnitrate has been added, being boiled for some minutes in a test tube. Prolonged boiling is necessary to be sure of the correctness of a negative result. If sugar is present, a black precipitate of metallic bismuth is deposited. Gray discoloration may occur with substances other than sugar, and while such a change causes the case to be watched and repeated examinations of the urine to be made, it is not considered conclusive of glycosuria in the absence of confirmatory evidence. If, after prolonged boiling, no change of color occurs, the bismuth subnitrate remaining undecomposed and retaining its whiteness, the conclusion is drawn that sugar is not present and further tests are not undertaken. If the black deposit is obtained, this, as a rule, means that sugar is present; still, in order to guard against possible errors, Fehling's test with alkaline tartrates and cupric sulphate is then additionally used. If this likewise gives a positive result, the qualitative examination is considered sure and quantitative determination of the amount of sugar is undertaken either by Fehling's method or by fermentation in Einhorn's saccharometer.

THE USE OF CHLORAL EXTERNALLY.—Dr. Brodnax, *La Semaine Médicale* in *Medical and Surgi-*

cal Reporter, June 1, 1895, gives the following formulæ for the external and local use of chloral hydrate :—

In *Cutaneous Pruritus* from urticaria, measles or other eruptions :—

℞—Chloral,
Carbolic acid, . . āā 50 (gr. xijss).
Olive oil, ... 50 (ʒ jss. gtts. xxx).
Apply locally.

In *Toothache :*—

℞—Chloral,
Camphor,
Carbolic acid,
Glycerine, ... āā 5 (ʒ j. ¼).

Introduce a ball of cotton moistened with this mixture into the cavity.

In *Earache :*—

℞—Chloral,
Camphor,
Carbolic acid, ... āā 50 (gr. xijss).
Castor oil, ... 15 (ʒ iv).

Instil a few drops of this mixture, previously warmed.

In *Acute Coryza :*—

℞—Chloral, ... 50 (gr. xijss).
Castor oil, ... 15 (ʒ iv).

If applied to the nasal mucous membrane, after cleansing of the surplus mucus, this mixture will arrest the secretion, calm the irritation of the mucous membrane, as well as the accompanying headache.

Disinfection of Tubercle-Infected Houses. —After a careful study of the effects of various disinfecting agents on the growth and development of the tubercle bacilli, Drs. Dilepine and Ransom sum up as follows :—

1. The disinfection of rooms which have been contaminated with tuberculous products cannot be obtained by means of the fumigation methods generally used at present. Sulphurous acid, and chlorine, as used under supervision by experienced municipal disinfectors, have proved practically useless.

2. The only other method of disinfection which seems to promise more satisfactory results is the direct application of a solution of chlorinated lime to the walls to be disinfected. This method has so far given satisfactory results, but is attended with discomfort on the part of those who have to carry out the disinfection.

3. Light is, in the case of the tubercle bacillus, the most important natural disinfecting agent.— *Brit. Med. Jour.*

Prognosis of Cerebral Hæmorrhage. — Alfred G. Barre, M.D. Edin., F.R.C.P. Lond., *Brit. Med. Jour.*, May 18, 1895, in a lecture on this subject delivered at the General Infirmary, Leeds, sums up as follows : In any case of apoplexy due to hæmorrhage into the hemisphere, if renal disease, Cheyne-Stokes respiration, or hyperpyrexia, any one, two, or all three be present, the patient will in all probability not recover. If no one of these is present, and does not make its appearance, he may, and probably will, recover, however long insensibility may last and however deep it may be.

The presence of other serious conditions, such as diabetes, chronic alcoholism, typhoid fever, or idiopathic anæmia, will, I have no doubt—for I have seen examples to this effect—exert just as fatal an influence as renal disease upon the course of sanguineous apoplexy.

Render the Intestinal Canal Antiseptic.— The Materia Medica gives at least one safe intestinal antiseptic. It is Salol. Professor Hare, in the last edition of his Practical Therapeutics, says that Salol "renders the intestinal canal antiseptic, and so removes the cause of the disorder, instead of locking the putrid material in the bowel, as does opium." He regards Salol as "one of the most valued drugs in the treatment of intestinal affections." Have we a substitute for opium for the relief of pain ? Here comes in the American coal-tar products, the first of which, for the relief of pain, stands Antikamnia. Therefore, we conclude that to remove the cause, to render the intestinal canal antiseptic, we have an invaluable remedy in Salol ; while to remove accompanying pain, to quiet the nervous system, and to reduce any fever which may be present we have a remedy equally efficacious in Antikamnia ; *an ideal combination for the treatment of this large class of diseases, and we may specially cite Typhoid Fever.* These two drugs are put up in tablet form, called "Antikamnia and Salol Tablets," each tablet containing two and one-half grains of Antikamnia and two and one-half grains of Salol.

AMERICAN DERMATOLOGICAL ASSOCIATION.—The nineteenth annual meeting of this Association is to be held at the Windsor Hotel, Montreal, on September 17th, 18ih and 19th, and gives promises to be one of the most intereeting in the history of the Association.

Officers for 1895 : President, S. Sherwell, M.D., Brooklyn, N.Y., ; Vice-President, J. A. Fordyce, M.D., N.Y., ; Secretary and Treasurer, C. W. Allen, M.D., 640 Madison Avenue, New York.

THE AMERICAN ASSOCIATION OF ORIFICIAL SURGEONS will hold its eighth annual session at Apolo Hall, Central Music Hall, corner Statr and Randolph Sts., Chicago, on September 4th and 5th

An interesting programme has been prepared, consisting of papers of a practical nature.

Books and Pamphlets.

THE FUNK AND WAGNALLS STANDARD DICTIONARY OF THE ENGLISH LANGUAGE. Single-volume edition : Half Russia, $12 ; full Russia (with Denison's Patent Reference Index), $14 ; full Morocco, $18. Two-volume edition : Half Russia, $15 ; full Russia (with Denison's Patent Reference Index), $17 ; full Morocco, $22. New York : Funk & Wagnalls Company, 30 Lafayette Place. Toronto : 11 Richmond Street W.

We all knew that when a wealthy American firm start out to "beat all creation," they spare neither labor nor expense to do it. Funk & Wagnalls have done it, in making what is no doubt the best dictionary of the English language that has ever been made. The colossal style in which the work was undertaken will be a surprise to many, as it was to us. When we say that 247 editors and specialists, and 500 readers for quotations were engaged upon this work, and that it cost nearly one million dollars, our readers will be able to form some conception of the amount of work put in upon it. The editors engaged upon the various departments of the dictionary have been selected from the front rank of English and American scholars ; each is representative of all that is latest and most approved in his own field of exploration and research ; and each is an accepted authority in his sphere. From beginning to end, the Standard Dictionary is the work of men thoroughly equipped in the schools of science, literature, and art, and of experts in all handicrafts and trades. It is neither extravagant nor invidious to say that no more capable and vigorous body of workers, has ever been called to the making of a dictionary in any language. As has been well said, "This Dictionary is, in fact, the joint product of many minds, reflecting the whole scholarship of the present age." It embodies many new principles in lexicography, contains 2,338 pages, 5,000 illustrations, made expressly for this work ; 301,865 vocabulary terms, which is nearly two and one-half the number of terms in any single-volume dictionary, and about 75,000 more than in any other dictionary of the language. Space at our disposal is utterly inadequate to mention a thousandth part of the good points of the work. Suffice it to say, that it is the best dictionary, by far, that we have ever seen, and covering the ground so fully as it does, ever expect to see. It is a better general library in itself than most men possess.

THE POCKET MATERIA MEDICA AND THERAPEUTICS. A *Résumé* of the Action and Doses of all Officinal and Non-Officinal Drugs now in common use. By C. Henri Leonard, A.M., M.D., Professor of the Medical and Surgical Diseases of Women and Clinical Gynæcology in the Detroit College of Medicine, Member of the American Medical Association, etc. Second edition, revised and enlarged ; cloth, large, 16 mo., 367 pages. Price, post-paid, $1. Detroit, The Illustrated Medical Journal Co., Publishers. 1895.

The second edition of this popular therapeutic work has had sixty-seven pages added to it, besides typographical errors corrected, etc. A new and complete cross-index has been prepared, which renders the quick finding of a non-familiar drug possible. This is an important feature lacking in ready-reference books. The descriptive arrangement of the drugs is as follows : Alphabetically, the drug, with its pronunciation [(officinal or non-officinal standing indicated), genitive case-ending, dose and metric dose. Then the English, French and German synonyms. If a plant, the part used, habitat, natural order, botanic description, with alkaloids, if any ; if a mineral, its chemical symbol, atomic weight, looks, taste, how found, its peculiarities. Then the action and uses of the drug or compound, its antagonists, its incompatibles, its synergists and then antidotes. Then follow its officinal and non-officinal preparations with their medium and maximum doses. Altogether it is a handy volume for physician, druggist or student, and will be frequently appealed to if in one's possession.

THE CANADA LANCET,

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

The LANCET has the Largest Circulation of any Medical Journal in Canada.

Original Communications.

THE PRIMARY REPAIR OF GENITAL LESIONS OF CHILDBIRTH

BY K. N. FENWICK, M.D., KINGSTON.

During the past few years so much has been accomplished through antiseptic methods, in obstetrics as well as surgery, that we need to review many of the procedures of former years and consider them in the light of this modern reform.

Thus symphyseotomy, at one time discarded as a dangerous operation, has now secured a permanent place as a means of saving mother and child, when the latter was too often sacrificed through that barbarous procedure — craniotomy.

The repair of recent tears of the genital tract has not met with the attention of the general practitioner that the subject deserves, and this operation, too, requires to be looked into again by the light of modern aseptic methods.

That tears both of the cervix and perineum do occur sometimes in the practice of the most skilful, and in spite of the most careful attention during labor, is a fact which everyone must acknowledge. He who says not, is either inexperienced or non-observant.

The blame, however, is not always from its occurrence, but from neglect in promptly detecting, and correctly repairing the damage when it does occur.

The careful physician should always examine, by sight as well as by touch, for often the most serious lesions of the pelvic floor are those which are not apparent superficially. The dread of hæmorrhage, or septicæmia, or of an anæsthetic; the supposed need of assistance; the idea that union may not take place; or else that these lacerations may undergo spontaneous cure, have all been urged as excuses for the neglect of this important duty.

Although spontaneous cure may sometimes occur in a moderate degree of laceration, it is an uncertain rule to go by, for even should the knees be tightly tied together, the passage of the lochia between the torn surfaces will prevent union by the first intention, nor will it ever unite as perfectly as when properly stitched.

When the parts are accurately adjusted by sutures, even when partial union is obtained, the support to the tissues is such as to restore their previous tonicity and vigor, whereas when left to nature the torn ends of muscles, nerves, fascia and mucous membranes are drawn into the cicatrix. The result is too often reflex irritation, subinvolution, or atrophy of the tissues, and loss of support of the pelvic floor, which is sure to end in retroflexion and prolapse. Were these tears carefully attended to in every case after confinement, one source of septic infection would be removed by closing the avenue for the admission of germs, while the work of the gynæcologist would be very materially curtailed.

While these remarks apply more particularly to lacerations of the perineum, and very few will nowadays dispute this position, the repair of a recent laceration of the cervix is still a mooted point. Skene thinks "it is impossible to fully estimate the extent of a laceration in the relaxed condition of the cervix immediately after labor, and the difficulty of accurately adjusting the sutures under the circumstances would subject the patient to exposure, which is unwarranted."

To operate on a recent tear it will be found easier to place the patient on her left side, irrigate with bichloride solution (1-8000), pass a tampon into the vagina so as to prevent blood flowing from the uterus over the wound, then with a curved needle, held in needle-holder, pass a silk worm gut suture deeply through the tear. Beginning at the vaginal part we pass as many sutures as are necessary until we reach the anal part of the wound. We must be careful to catch up the torn fibres of the Levator ani whether the lesion is central or into one or other sulcus. If the tear is into the recto-vaginal septum, that must be carefully adjusted, first by at least two sutures which will restore the torn sphincter ani, and then

adjust the rest of the wound as in the less severe cases.

The American Text-book of Gynecology says, "It is not proper, in view of our light and methods of to-day, to attempt the immediate repair of cervical tears," unless it is due to rupture of a circular artery, when the immediate operation must be undertaken.

Bolt says, "the ideal method would be, could it be done with propriety, to sew up all tears immediately after delivery, as has been done by Pallin and others; but if we consider the objections to this method it is obvious why it has so few advocates."

These objections we have already mentioned, but, perhaps, the real reason is more generally from carelessness or inability on the part of the general practitioner.

When we think for a moment of all the consequences likely to follow from a neglected laceration of the cervix, such as endometritis, abrasion of os, menorrhagia, subinvolution, reflex disorders, and even cancer, does it not seem very necessary to weigh this subject carefully and consider if we are doing our whole duty to the lying-in woman should we neglect to examine her carefully after labor, and if a marked laceration of the cervix is discovered, to accurately adjust its edges by sutures.

By thus acting we may prevent an occurrence of these serious consequences which are sure to result from our neglect.

Having now decided upon the necessity of always repairing recent tears of the genital tract, let us consider the best methods of doing this, for I am convinced the general practitioner is often ignorant of the proper method of operating.

1. *Perineal Tears.*—A few months ago I was called to see a woman, five days after confinement, who was suffering from septicæmia. On making a digital examination my finger passed between the labia directly into the rectum. I found the attending physician had used forceps, had torn through the perineum and recto-vaginal septum, and then closed the wound by two or three skin sutures. The result was, that fæces and lochia were held in the wound, giving rise to septicæmia. I at once opened up the wound, thoroughly irrigated the parts, and, fortunately, the woman recovered. A few weeks ago I did a flap-splitting operation which has been entirely successful.

An anæsthetic is not necessary, but if the patient is nervous or over sensitive, it is best to use it. Vaginal douches are not necessary afterwards, but I prefer some form of aseptic occlusion dressing. The bowels should be kept solvent in all cases.

2. *Cervical Tears.*—In a case of hæmorrhage, occurring after labor, where the uterus is firmly contracted, the source of it is usually a torn artery in the cervix, and the immediate repair of the injury is a matter of necessity. An alternative is the gauze tampon, but surely this is not to be compared to the other plan.

It is a question of election, however, when we find a severe tear which we know may possibly heal if the patient's recovery proceeds aseptically, but the chances are against such a favorable result, while there is danger of sepsis, subinvolution, and the necessity of a subsequent operation for its cure. Are we not, then, justified in doing this simple operation and thus leaving our patient in the best possible condition to regain complete health?

The operation is simple, requiring neither assistant, anæsthetic, nor even a speculum. By placing the patient on her left side and grasping the torn cervix with a volsellum, draw it down to the vulva, and pass a sufficient number of sutures to close the tear. The sutures should be tied tightly, otherwise when the œdema leaves the tissue they would loosen, and so result in failure.

While silk worm gut is the only material which should ever be used in closing perineal tears, either this or chromic cat gut should be employed for the cervix, and for several reasons I prefer the chromic cat gut.

In conclusion, then, I would urge that every woman after labor should be carefully examined for tears of the genital tract, using every aseptic precaution, and should they be discovered it is our duty to repair them accurately within a period of twelve hours after the confinement.

In this way we will be doing our whole duty to the lying-in woman, in assisting to restore her to a condition of perfect health, and preventing the evil results of such neglect which usually means that she must fall into the hands of the gynæcologist for a subsequent operation.

THE PRESENT STATUS OF THE ELECTRICAL TREATMENT OF FIBROIDS.*

A. LAPTHORN SMITH, B.A., M.D.

Member of the Royal College of Surgeons of England; Fellow of the American Gynæcological Society; President American Electro-Therapeutic Association; Surgeon-in-chief of the Samaritan Hospital for Women, Montreal; Gynæcologist to the Montreal Dispensary; Surgeon to the Women's Hospital, Montreal.

The present age in gynæcology and abdominal surgery, especially, may be called the extreme surgical age: and, as a result of the wonderful advances and the great lowering of the death-rate of surgical operations, owing to the application of the principles of asepsis, surgical enthusiasm has reached its highest point. One must have a great deal of courage indeed, to advocate any other method of treatment than surgical operation, especially at a meeting where the surgical element so greatly preponderates: nevertheless, the writer believes that the majority of women, with fibroid tumors, can be relieved of their pain and bleeding, by means of the constant electrical current. If employed within certain limits, it is absolutely devoid of danger; while the application of the treatment should be almost devoid of pain. On the other hand, the surgical treatment, even under the very best of conditions, has, so far, always been accompanied with a mortality rate. There are fewer deaths than there were when Freund lost seventy-five per cent. of his cases of abominal hysterectomy, but still the death rate remains, so that the electrical treatment, with no death rate, had this great advantage over the surgical treatment. The electrical treatment, also, leaves the ovaries and the tubes in no worse condition, but, on the contrary, in a rather better condition than they were before: while the surgical treatment is nearly always accompanied by the removal of the ovaries. With married women, and indeed with all women, the loss of the ovaries was no small affair. The temptation to operate was very great. The patient's fate was sealed one way or the other, when the operation was concluded, and whether she lived or died, the surgeon received a great deal of praise for having the courage to perform the operation. Also the remuneration was sometimes very considerable. With the electrical treatment, on the contrary, it was tedious, required sometimes as many as fifty or one hundred applications, and there were occasional relapses. This application took up a good deal of time, but this objection may be lessened by devoting two afternoons a week, exclusively to this treatment; in which case a considerable number of applications may be administered in a few hours, the patients being prepared in an adjoining room, by a nurse or an assistant.

The physician who cures the patient with electricity does not receive the same credit for his good work as the one who cures her by surgical means, so the temptation is very great to operate; but he could show fifty or sixty women who had remained well since several years, who had been treated by electricity. A great many well-known gynæcologists have used the Apostoli method for fibroids with good success, but have refrained from publishing their cases, for fear of injuring their surgical reputation. This is a fact known positively to the writer.

One of the objections to electricity which has been raised is unjust, and that is that it causes adhesions. The writer referred to several cases which had been cured of their symptoms, but were subsequently operated on, for other reasons, and in which no adhesions whatever were found after as many as one hundred strong applications of the galvanic current.

Another case which he referred to demonstrated the truth of Apostoli's dictum that when the application of this method causes febrile reaction, the tubes are badly diseased. In this case, which had been treated for fibroid, it had every appearance of being one, could not endure the Apostoli method, and was operated on by the writer, who then found that the large pear-shaped mass in the centre of the abdomen was made up of two large sausage-shaped tubes filled with pus, and two ovaries the size of oranges, and the uterus, all glued together and covered with lymph. These were separated from each other and removed, all except the uterus, which, not being much enlarged, was left. This patient made a perfect recovery.

He was very much opposed to galvano-puncture, which was, he considered, a dangerous proceeding,

*Abstract of paper read before the section of Obstetrics and Gynæcology of the American Medical Association, at Baltimore, May 7, 1895.

and he thought that one could obtain all the benefits required by the gentle use of the positive pole, either in the form of platinum, zinc or copper in the uterus, which dried up the bleeding mucous membrane, and by its tonic action upon the muscular tissue through which the blood vessels pass to supply the bleeding mucous membrane cut off the blood supply just as surely as though we tied the ovarian arteries. The action of the electric current, he said, as applied to fibroids was threefold. The first was not mysterious, but was but the arrest of circulation in the dilated capillaries, by electro-chemical cautery. The second is no more difficult to understand than the action of ergot or strychnine ; it not only tones up the vasomotor system, making the calibre of the arteries less, but it calls into play the special and remarkable power which the uterus possesses of controlling its own circulation when it has the strength to contract.

The third effect of the current, its electrolytic action is, he admitted, as mysterious as it has ever been, but not more so than the invariable absorption of syphilitic gummatous deposits following the administration of iodide of potassium. Whether what we call electrolysis means the actual breaking up up of an organic tissue into inorganic atoms, or whether it means, as seems more likely to me, that the growth deprived of its blood supply undergoes fatty degeneration and is partly eaten up by phagocytosis, stimulated to greater activity by the trophic nerves, no one with a large experience with this subtle fluid can deny that a uterus infiltration with and enlarged by the deposit of fibrous tissue, whether localized in the form of fibroids or diffused as in areolar hyperplasia, so that the sound will enter four or five inches, will invariably diminish in depth by means of electrical treatment.

Then again what is the enormously enlarged uterus after delivery but a bleeding myoma? Does it not stop bleeding when the arteries which supply it with blood are squeezed by its contract-walls? Does it not rapidly get smaller when, for the want of blood and exercise that immense mass of muscular silently undergoes fatty degeneration ond returns to the blood from whence it came.

Wonderful and almost incredible as the total disappearance of a fibroid or myoma may seem to some, it is no more mysterious thon this wonderful process of nature which we call involution. Have those who doubt and even worse, deny the power of electricity to work a change in fibroids, never reduced the size and weight of a uterus which nature had failed to involute? Has Emmett never reduced its size by repairing a lacerated cervix? Have Churchill and Athill and ten thousand others with honored names never reduced the quantity of tissue in the uterus by the application of iodine? Have not a hundred thousand others reduced the weight of blood and muscle and areolar tissue in the heavy uterus, by means of glycerine and hot water and other therapeutic measures?

Then why in the name of reason and justice deny that an agent which we can see blanching tissues before our eyes, and making muscles of every kind contract, why deny, he said, that it can diminish the blood supply too, and favor the fatty degeneration and absorption of the fibrous or myomatous uterus?

The electrical treatment of fibroids, reduced to the above simple equation, and stripped of all the extravagant claims which were at first made for it, stands to-day upon a foundation so strong and true that it will find an honorable place in the treatment of fibroids as long as women shall dread to die by the surgeon's knife.

Selected Articles.

THE PRESENT STATUS OF THE DIPHTHERIA QUESTION.

Much can be learned from a study of the present status of the diphtheria question. What is more important, a proper direction may thereby be given to future work. It is strange how the minutiæ of diseases escape careful consideration until some special line of research calls for the most exact examination of all details. Future work on diphtheria can be made more rapidly productive of results when the questions to be solved are accurately outlined. Certain it is that the diphtheria problem cannot be reduced to the same simple formula in man as in the lower animals. In the artificial diphtheria of animals the Loeffler bacillus is the exciting cause, the antitoxine is the neutralizing agent — and there the matter ends. In man, however, many etiologic factors remain yet to be solved.

The use of Loeffler's culture-serum for diagnostic purposes, though adapted to clinical ends,

has led to scientific misconceptions. Throughout the recent literature we find the terms "pure culture" and "mixed infection" used haphazard. These terms lack scientific definiteness. No one knows exactly what "mixed infection" is, and there is reason to doubt if a "pure infection" ever occurs. Nothing can be more self-evident than that the question of mixed or pure infection cannot be solved by one culture-medium alone, especially if that medium is especially devised to favor the growth of others. To use Loeffler's culture-serum for diagnostic purposes is highly satisfactory; to use it as a basis of scientific differentiation is clearly irrational.

Silberschmidt examined 91 cases of diphtheria with Loeffler's serum, bouillon, and glycerol-agar, and all but one showed the presence of streptococci or staphylococci. Those who work with glycerol-agar alone will sometimes fail to detect the Loeffler bacillus when it is present in the throat; and those who work with Loeffler's serum alone will fail to find other germs that could be demonstrated by other means.

Bernheim has shown that if streptococci and Klebs-Loeffler bacilli are inoculated in the same tube, the streptococci are retarded in development. Bernheim, by the use of glucose-bouillon and Loeffler's serum, demonstrated that none of his cases presented "pure infection."

In a recent examination of over 120 throat cases, I failed to find any that might be considered a "pure infection."

The term "mixed infection" is far from standing for anything definite. If every case in which streptococci or staphylococci are present at the site of infection is a case of mixed infection, then cases of pure diphtheria are rare indeed. The predominance of one germ over another cannot be made the basis of scientific discrimination, especially if only one culture-medium is used. In follicular tonsillitis, staphylococci and streptococci are present. In a case of "mixed diphtheria" we should expect in addition to the symptoms due to the Klebs-Loeffler bacillus, those due to the streptococcus and the staphylococcus but this is notoriously untrue, as the symptoms (fever, headache, backache) of follicular tonsillitis are usually more severe than those of diphtheria.

What is "mixed infection," and how can we tell that the cocci present in a diphtheric throat are playing any *rolê* in the disease? Certainly, to talk of the comparative value of the antitoxine in cases of pure and in those of mixed infection, is thoroughly irrational, as we do not know what is pure infection and what is mixed infection. A prognosis cannot be made from the bacteriologic examination, as some cases die in which staphylococci predominate, others in which Klebs-Loeffler bacilli predominate. It may be interesting to note here that Bernheim has shown that if animals are inoculated with the filtrate of cultures of diphtheria-bacilli and streptococci, the disease runs a more violent and rapid course; if, however, a filtrate of cultures of staphylococci is used in large quantity, the disease is milder than in cases of pure diphtheria.

The question of deciding the infectiousness of convalescent patients is not so easy as was supposed. When a pharyngeal culture fails to reveal the presence of virulent Klebs-Loeffler bacilli, the patient is usually dismissed as no longer dangerous. Tezenas du Montcel showed that when there is a nasal discharge, the pharyngeal culture may repeatedly prove negative, and still virulent bacilli may persist in the nose from one to eight weeks. Sevestre et Méry examined 18 cases from day to day in 1893. In one case, non-virulent bacilli persisted in the pharynx several days; one month later, the bacilli were found to have regained virulence, and a sister of the patient was seized with the disease. In two other cases virulent bacilli were found fifteen days after recovery, although intermediate cultures revealed non-virulent bacilli. In two other cases pharyngeal cultures were negative, though nasal cultures showed virulent bacilli, in one case up to the forty-ninth day. These researches prove that non-virulent bacilli may regain their virulence, and that an existing nasal discharge should not be overlooked in declaring convalescents contagion-free.

The relation of albuminuria and nephritis to diphtheria is another subject that requires clearing up. All writers have noticed the great frequency of albuminuria in diphtheria, and most of them have used albuminuria and nephritis as interchangeable terms. Nothing has been made more clear by recent study than that in a large proportion of cases the albuminuria of diphtheria does not depend on nephritis. We are not justified in diagnosticating nephritis unless we find epithelium, casts, or blood in the urine. Anyone who takes the trouble to examine diphtheric urine microscopically, will be surprised to find how often albuminuria may exist without the presence of renal elements in the urine. Fischer reports 141 cases of albuminuria without casts. I have myself frequently examined the albuminous urine of diphtherics without finding evidence of nephritis. Schroeder reports 44 cases of albuminuria, only 6 of which presented evidence of nephritis. *The Stadt Physikat of Trieste* reports 105 cases of diphtheria; 75 of these had albuminuria, but only one-half of these had casts in the urine. This rather startling clinical evidence is made more striking by *post-mortem* observations. Goodall reports 30

cases of suppression of urine in diphtheria, leading to a fatal issue in 27 cases. The common characteristics of these cases were: Severe local disease; marked albuminuria; never hæmaturia or sediment in the urine; anuria more or less complete; frequent vomiting and cardiac failure. *Post-mortem* examination of the kidneys showed them to be usually normal to the naked eye in every respect. Ten cases were examined microscopically and only trivial changes found. Nothing can be more conclusive than that marked albuminuria and renal insufficiency may be due to causes outside of the kidneys themselves. F. Siegert reports a series of 100 tracheotomized diphtheria cases; 27 of these had albuminuria, but nephritis was found *post-mortem* only three times; 10 patients had from 0.5 to 6 per cent. of albumin in the urine *intra vitam;* careful *post-mortem* failed to reveal the presence of nephritis.

In estimating the effect of the antitoxine on the kidneys, therefore, much more must be taken into account than the existence or the degree of albuminuria. In fact, a new subject is opened for investigation, and the albuminuria of diphtheria has yet to be explained. One thing seems fairly certain, viz., that the antitoxine exerts no harmful influence on the kidneys.

It is probable that the experiments of Mya represent the truth of the matter, viz., that the antitoxine has no appreciable effect on heart, blood, or kidneys. This observer watched four children from eighteen months to six years of age. He kept them under very close observation for several days, noting pulse, diurnal temperature variation, blood, and urine. Then he injected 30 c. cm. of the antitoxine, and noted the changes during the succeeding hours and days. The first child, aged six years, convalescent from measles, presented the following conditions for several days before inoculation: The erythrocytes numbered 5,160,000; the leukocytes 6916. The average quantity of urine for twenty-four hours was 660 c. cm.; the specific gravity was 1014; the urea equalled 14.25 gm.; there was present neither glucose nor albumin, but a trace of indican. The rectal temperature varied from 37.5° C. to 37.8° C. The injection of the antitoxine was followed in a few hours by a reduction of the erythrocytes to 3,541,666; an increase of the leukocytes to 9381. No variation was noted in pulse or temperature. The urine increased to 1280 c. cm. on the second day; the secretion was free from albumin, glucose, and urobilin. All of these variations were transitory, and in a few days the normal was regained. The results in the other three children were the same. The changes due to the antitoxine may be summarized as: 1. Transitory diminution of the red blood-corpuscles. 2. Slight leukocytosis. 3. Polyuria. 4. Slight increase in the excretion of urea.

That the oligocythemia was not due to destruction of corpuscles is proved by the absolute absence of urobilin from the urine. It was probably due to dilution of the blood from the lymph-channels, as also evidenced by the leukocytosis and polyuria.

These observations of Mya are very important, as they were conducted with great care. Moreover, they agree with other clinical observations. Albuminuria is present in a majority of cases of diphtheria treated without the antitoxine, being variously estimated by Henoch, Baginsky, and Eberth, as occurring in from 50 to 60 per cent. of all cases. Schwalbe reports 470 cases of diphtheria in the Friedrichshain Hospital, before the antitoxine period; albuminuria was found in 227, though examinations were made but once in each case. Kolisko says that in 75 *post-mortems* of cases treated with the antitoxine, the kidneys presented no deviation from kidneys seen before the antitoxine period. Ganghofner, in a most guarded paper, reports albuminuria, lasting any considerable time, as occurring only in 20 of 110 injected cases. Of 33 cases injected on the first or second day, none had severe albuminuria. In Cincinnati albuminuria occurs in nearly every severe case of diphtheria. I had the opportunity in March of making a curious observation of five children in two families, two of whom were treated with and three without the antitoxine. The cases all ran a mild course, but all suffered from rather marked albuminuria. The cases lay side by side, in a hospital ward. The appetite was good in all, and there was no pain, no œdema, no morphotic elements in the urine; yet the albuminuria persisted in all, notwithstanding treatment for from two to three weeks. Authorities are almost unanimous in the belief that the antitoxine does not lead to increase in the proportion of albuminurics, some even noting a diminution.

Testimony on the subject of the heart is variable, the vast majority of writers noting no bad effects on the heart. Some few, among whom is Baginsky, believe that the heart is unfavorably effected. Mya observed absolutely no variation in the rate, rhythm or tension of the pulse, as shown by sphygmographic tracings. Observations of the blood have yet to be made. Certain it is that fear of bad effects need cause no one to abstain from the use of the antitoxine.

It is yet impossible to determine the effects of the antitoxine on the paralysis of diphtheria. Exact figures are not available. The occurrence of paralysis varies in different epidemics and in different regions. In Berlin it is very common (Henoch); in Munich it is not often met with (Seitz); in Halle it is uncommon (v. Mering). It seems incredible that the use of the antitoxine should increase the proportion of cases attended with paralysis; clinical reports, on the other hand,

seem to show that the proportion is not reduced. Heubner reported paralysis in 7.4 per cent. of 207 cases treated with the antitoxine; C. Seitz injected 74 cases on the first or second day of the disease, and encountered some very severe cases of paralysis. Hager had 3 cases of paralysis among 20 under observation!; Washburn 6 among 48 survivors; Fischer 21 in 190 cases; Mya 5 in 50 cases; Soltmann only 4 among 76 recoveries; Germonig only 8 in 290 survivors; Siegert 33 in 100 tracheotomized cases; and so on through a long list. It is advisable to look over old records of the pre-antitoxine period and strike a general average for each locality, and then to follow up all new cases with watchfulness, This will require years of attention, and this is destined to be one of the last problems connected with the subject to be solved.

When we come to the final question as to how far the antitoxine has reduced the mortality of diphtheria, we enter upon a most perplexing field of enquiry. When all is said and done, the statistical method is the court of ultimate appeal; and yet just this method exposes us to a thousand errors. Here, too, it will be found profitable to seek the sources of error and eliminate them as far as possible from future research and summaries. Up to the end of January over 3000 reported cases had been collected, with a mortality of 20 per cent. (Heubner), and reports since that time have given us about the same results. On its face-value this seems to give us a marked reduction in mortality as compared with former times, and yet a critical estimate bids us withhold our judgment.

I should like to emphasize the following propositions:

1. Hospital statistics considered by themselves are likely to be misleading. 2. Diphtheria treated under favorable conditions is not so fatal a disease (even in Europe) as is commonly supposed. 3. The bacterial criterion of diagnosis has a wide influence on the results achieved.

Regarding Hospital statistics. Common observation teaches us that agitation of new remedies among the populace leads to a rapid influx of patients suffering from that disease to the centres of treatment. In 1890 the tuberculous world flocked to Berlin and to the hospitals for tuberculosis. During the past year hospitals have dealt with vastly more cases of diphtheria than heretofore. We are indebted to Gottstein, of Berlin, for some brilliant observations on this score. He compares the admissions and deaths in the Berlin hospitals with the municipal cases and deaths during the past five years. From September 30th to November 24th there died of diphtheria in the Berlin hospitals in 1890, 131 cases; in 1891, 124 cases; in 1892, 178 cases; in 1893, 197 cases; and in 1894 (antitoxine period), 131 cases; the admissions, however, during this period increase from 318 in 1890 to 712 in 1894. The mortality in Berlin from diphtheria is less than half the mortality in the Berlin hospitals; *i.e.*, the severest cases are sent to the hospitals. Now if all of the cases in Berlin were sent to the hospitals the mortality would, without any change of treatment, fall, *eo ipso*, 50 per cent.

This is just what happened in the autumn of 1894. The number of admissions more than doubled and the mortality sank 50 per cent. The total mortality, however, was not thereby reduced, and as many cases died in 1894 as in 1890, only the place of their dying was changed. In 1890 there were 1592 deaths from diphtheria in Berlin, of which 682 (or 43 per cent.) occurred in the hospitals; in 1894, from January 1st to November 24th, there were 1281 deaths in Berlin, of which 737 (or 57.5 per cent.) occurred in the hospitals. Gottstein concludes with complete justification as follows: 1. The death-rate in hospitals was reduced 50 per cent,, because twice as many cases were admitted. 2. The total mortality in hospitals in 1894 (to November 24th) was already larger than for 1890 or 1861. 3. The total mortality in the hospitals *and* the city was not at all reduced.

This able analysis explains the apparent benefit of the antitoxine in many other hospitals, and we may justly doubt the value of the statistics of any hospital that has suddenly experienced a large increment of patients.

With very few exceptions it is true that the mortality from diphtheria in cities at large is very much less than in the diphtheria hospitals, and hence any influx from the city to the hospital would of itself lower the mortality percentage of the latter. This is exemplified in the reports from Trieste. In 1893, 110 cases were treated in the hospital and 52.7 per cent. died; in the first eight months of 1894, 159 cases were treated and 46 per cent died. Now came the antitoxine period; in the next five months 362 cases (!) were admitted and the mortality was naturally reduced to 20 per cent. Hahn reports from the Friedrichshain Hospital that though the number of cases in 1894 was very much increased, the total mortality in the hospital was not reduced, but only the percentage. Thus we see that hospital statistics *per se* are unreliable, and we should know in every case the number of cases treated as compared with the total number in the respective city.

Diphtheria treated under favorable conditions is not so fatal a disease as is commonly supposed. At the Congress of Internal Medicine, recently held in Munich, Baginsky said that his contemplation of diphtheria in former years was among the most gloomy of all his experiences: "In the diphtheric pavilion I gained the impression that we were absolutely helpless in dealing with diphtheria, and that nursing did more than medicines." All this

sounds dramatic, but we must remember that at the Munich Congress Baginsky was pleading the cause of the antitoxine. In 1891 his contemplations were not so gloomy nor his results so bad as he has since depicted them. In his *Arbeiten aus dem Kaiser u. Kaiserin Friedrich Kinderkrankenhause*, published in October, 1891, he thus sums up the work of the diphtheria pavilion for the first year of the hospital's existence : 244 cases were treated; the mortality was 40 per cent.; 37 of these cases were admitted with far advanced septic and gangrenous diphtheria and died soon after admission. "Subtracting these cases," says Baginsky (p. 246), "but including a larger number of those that were tracheotomized, we had a mortality of 23.1 per cent., a result in diphtheria with which we ought to be very well satisfied." In his recent book he reports 527 cases treated with the antitoxine, with a mortality of 15.6 per cent.

Much stress is laid by the upholders of the antitoxine on the fact that the sooner the cases are injected the better the prognosis; and the brilliant achievements of the antitoxine in this particular are above dispute. It is, perhaps, not useless to call attention to the fact that before the antitoxine period the prognosis was good in cases brought early for treatment.

F. Siegert gives his results in the treatment of diphtheria without the antitoxine in the children's clinic at Strasburg. He cites in detail 100 cases that required tracheotomy—hence all severe cases. Six were received on the first day of the disease—none died; ten on the second day—two died. After the second day the mortality ranged from 31 to 53 per cent. Siegert urges further that fatal complications do not arise, as a rule, until after the fourth day, and that, therefore, if cases are treated early the mortality will be reduced *eo ipso*. Of fifty fatal cases in his clinic, there died on the first three days of the disease none; on the fourth day five; on the fifth day eight, etc. Dangerous symptoms do not arise early; parents wait until death seems imminent and then hurry their children to the hospital. During the antitoxine period they take them early and hence the percentage of recoveries is greater.

Ritter states that in the two years preceding the use of the antitoxine he lost no case of pharyngeal diphtheria that was brought early for treatment, although he had had altogether ninety-one cases.

Baginsky, Kossel, Ehrlich, and others emphasize the fact that after the injection of the antitoxine the membrane never spreads into the larynx. Ganghofner, however, in an article friendly to antitoxine, cites his pharyngeal cases during 1893, and finds that in only two cases did the membrane spread to the larynx after treatment was instituted. The mortality among these pharyngeal cases was only 15.8 per cent.

We learn from all these observations that diphtheria treated promptly under favorable conditions (hospital-hygiene, good nursing, food, and air) is by no means so fatal as we are taught to suppose, but that even in the pre-antitoxine-days the mortality was great only among neglected or improperly situated patients. In private practice, in Cincinnati, at least, the percentage of fatal cases is small, the mortality ranges here from 19 per cent. (in 1891) to 33 per cent. in (1888), but the death-rate among the upper classes is very much less.

It is not true, as was first supposed, that all cases treated on the first or second day with the antitoxine will recover. Ganghofner had two cases that were injected on the second day to prove fatal. Henbner reports failure in a few cases injected on the second or third day. Kohts injected a case on the second day; twenty-four hours afterward new and extensive membranes formed. In another case, injected on the second day, the larynx became involved later, and tracheotomy was required. In the Trieste hospital five cases died, though injected on the second day.

Soltmann had thirteen deaths among eighty-nine cases; six of the fatal cases were injected during the first four days of the disease; and in thirteen cases the membranes descended to the pulmonary aveoli, notwithstanding the antitoxine.

Vierordt reports eight deaths among fifty-five patients. Two of the fatal cases were injected on the second day and two on the third. Ritter details the following history : He saw a strong child, aged three years, that had been taken sick only a few hours before; on both tonsils circumscribed patches appeared; the temperature was 39.7°, the pulse between 110 and 120. Behring's antitoxine No. 3 was used. The membranes, nevertheless, spread, the larynx was invaded, tracheotomy was refused, and the child died on the sixth day.

We are compelled to admit that the antitoxine fails to cure a certain proportion of cases, notwithstanding the fact that all other conditions are favorable.

Finally, a few words are in order regarding the effect of the bacterial diagnosis on hospital statistics. Formerly, at least in American cities, though all the fatal cases were reported, many mild cases were not. Now, that bacterial diagnosis and municipal supervision render diphtheria cases in a measure public property, many more cases will be brought to the notice of health-officers than formerly, and the mortality rate will seem to sink. This is prettily illustrated in the recent health report of Boston for the year 1894. Boston has not only a Bureau of Bacteriology, but it also has an army of school-inspectors to examine school children. With these combined means an enormous number of cases of diphtheria are ferreted out, cases that formerly would have been called simple sore-throat. This statement is made in the report

itself. Thus in 1894 Boston had 3,019 cases of diphtheria. The greatest number of cases of any previous year was 1814. We would expect from this an enormous reduction in the mortality, but find that the mortality (27.06 per cent.) is but slightly less than in preceding years—and yet the Boston authorities congratulate themselves on having reduced the rate of mortality by means of the antitoxine. They have simply reduced the rate by means of bacterial diagnosis and school inspection, while the absolute mortality is far in excess of former years.

Enough has been written to show that the questions concerning diphtheria and the antitoxine are still in their infancy, instead of nearing solution. It is well to know the pitfalls that are in the way of our attaining the truth.—Henry W. Bettman, in *Med. News.*

RHEUMATISM AS A CAUSE OF APPENDICITIS; POINTS IN ITS MEDICAL TREATMENT.

The etiology of appendicitis in many instances is still very obscure, both for physicians and surgeons. It is therefore satisfactory to become convinced, by careful clinical observation, that one has found an obvious and frequent cause of numerous cases of a disease which is frequently fatal.

To my mind this cause is rheumatism. The judgment I now hold definitely about this matter is not an opinion reached rapidly and without carefully weighing the observations and reports of others. After several years of close inquiry into the origin of those cases I have met with or read about, I have not been able to explain apparently inconsequent facts from any other standpoint. I do not remember personally to have seen an attack of acute articular rheumatism either directly precede or follow evident signs of appendicitis, and to be connected with it in such a way that the relation of the two affections was clearly defined. Although this statement is correct of my own experience, it is not true of others. And already more than one such report has been made. When it comes to the milder, and, according to some, perhaps less characteristic symptoms of rheumatism, these I have repeatedly observed in patients who have had one or more attacks of appendicitis. Again, I have seen more than one patient who, subsequent to attacks of appendicitis, has had decided articular manifestations, and during many years of this rheumatic localizations, the appendical region has remained entirely free from any inflammatory disease.

There is really nothing rational to urge against rheumatism as a frequent cause of appendicitis. That rheumatic inflammation should attack this region very often is only what we should expect, if we consider the close relationship of the appendix with the peritoneum; and the fact that this serous membrane, like the pleura or the pericardium, is precisely the structure for which rheumatism, when it leaves the joints, has a special predilection.

The sudden development of many examples of acute appendicitis does not in any degree militate against rheumatism as an efficient and frequent cause of it, since the sudden and rapid development of acute rheumatic inflammation is true of the tonsils, the ovaries, the uterine appendages, and the joints themselves. The rapid progress toward suppuration is no reason to rule aside my explanation, since acute quinsy with suppuration, now well known to be of rheumatic origin—as salpingitis with speedy formation of an abscess cavity of like origin—is no uncommon finding.

No doubt in many cases which I might easily report, exception could be taken by the reader to my diagnosis of the rheumatic cause of appendicitis, in view of possible error of interpretation. Here, again, as in most things medical—particularly where clinical manifestations are seemingly doubtful until repeated experience has corroborated proof—we are forced to apply the touchstone of wise therapeutic interference. In this connection I cannot but affirm that treatment with salicin, or the salicylates, in sufficient and frequently repeated doses, has, in my experience, diminished pain and inflammatory manifestations in the appendical region more frequently than any other routine method of treatment. In many cases, I am now thoroughly convinced, suppuration has by this means been mainly avoided. Not that other remedial measures of a suitable kind should not be instituted. Among these I place as very important liquid, or low diet, and relative rest. In very acute cases, of course, with pronounced fever and vomiting, entire rest in bed, and liquid diet solely, are imperatively required. In these instances, moreover, I would insist in the beginning upon the local application of poultices, or the ice-coil, or ice-bag. I usually prefer repeated poultices, as I believe them more suitable to resolution of rheumatic inflammation. Again, I should rely upon moderately large laxative enemeta to free constipated bowels in those persons who have very marked general reaction. In numerous instances, I am equally satisfied, where the general reaction is not so pronounced, a mercurial in the form of six or eight grains of grey powder, or an equal dose of blue mass, serves a better purpose. I do not believe it increases the danger to the patient, as I do not believe it increases the peristaltic action of the bowels to any appreciable extent, and I am of the opinion that it promotes the flow of the bile, which, in more ways than one, is

directly useful. Of course, in some cases where pain is very severe, anodynes should be resorted to, and in extreme cases of this kind hypodermic injections of morphine are our final resort. Yet let us bear in mind that like the operation itself, unless obviously called for, it is bad treatment—radically bad—if my belief in regard to the causation of many cases of appendicitis be correct and sustained.

I cannot but think, even as I write, of an opinion held by one of our most eminent surgeons, viz., that in prescribing a drug the same care and knowledge should be exercised as in performing a severe surgical operation. Evidently the thought passing through the mind of this great exponent of his side of the question, was the distinct conviction of the untold harm accomplished by ignorant interference, seemingly trivial in character. Now, morphine, of all drugs, is the one that locks up most rapidly and completely our secretory functions. It is true of the kidneys, the stomach, the bowels, the liver, the respiratory organs, in one way or another. How, then, can it be rational, when we wish, above all things, to promote and further rapid secretion and excretion, to employ, in very active manner and doses, the drug that arrests it all? Pain is present, says the answer, and pain must be subdued. Yes, I reply, but make the attempt first of all, and as long as you should, with drugs that will not be manifestly harmful. Codeine, in frequent and sufficient doses, will often advantageously take the place of morphine. It does not lock up secretions to anything like the same degree; it does not nauseate or constipate much, as a rule. It does mitigate, and sometimes abolish, pain. It allows time to be utilized so as to use the proper remedial drug—viz., salicylate of soda—and thus it guards the patient not infrequently against surgical interference, which is the ruling spirit of the hour. I do not wish to be considered as one of those who object at all to laparotomy in appendical inflammation, when surgical interference is called for. I do wish at this time to point out the medical way in which much that is beneficial may result, and considerable harm may be avoided.

In conclusion, I would add that local depletion with leeches, or wet cups, over the painful region, in patients of full habit, remains at present, as during the past, a proper and judicious abortive treatment of appendicitis.—Dr. Robinson, in *Med. Rec.*.

MICROBES, TOXINS, AND IMMUNITY.

A new line of study has recently sprung up which has opened out an entirely fresh view before us; but a few years ago bacteriology was unheard of, and look at the important information it now gives us. A new departure has been created by it in both medicine and surgery. In relation to operative surgery, it has laid the foundation for success which was previously thought to be quite unattainable, and in this branch of practice it has led to the greater surprise than in medicine, as the now known effect upon the healing process of the exclusion of micro organisms had not hitherto entered the mind. In medicine, on the other hand, suspicion has for a considerable time existed that certain diseases might be attributable to the invasion of the system by micro-organisms.

The discussion at the Pathological Society in 1875, on the germ theory of disease, marks an epoch in the history of the subject, and shows that up to that time no decided progress had been made towards settling the question; for whilst some spoke in favor of the theory, no less an authority upon fevers than the late Dr. Murchison expressed himself strongly against it. Since then, however, knowledge upon the point has advanced in great strides, and, as we are all now aware, not only has it been clearly ascertained that different organisms are productive of different diseases, but the distinguishing form and life history of many of these organisms have been definitely made out. To Pasteur we owe the initiative in this matter. Once the discovery made that a micro-organism was to be found in the body in association with a particular form of infectious disease, the foundation was laid for further research, and it soon became known that the organism could be cultivated outside the body, and thus cultivated was capable by inoculation of producing the disease. The start was now given, and bacteriology has since grown into an important science belonging to medicine, which has already much advanced our position, and promises to do so much more. Bacteriology is no mere abstract science, devoid of useful application. It gives us knowledge which enables us to control disease in a manner that could not be accomplished before. Knowing irrefutably that a particular disease is due to the invasion of the system by a specific living organism, we are taught that our first efforts should be directed to preventing the dispersion of the organism from an infected person to those around. To what extent we have the power of doing this is shown by the successful manner in which a disease that may have intruded itself amongst us may be stamped out. See how the spread of cholera has been barred in this country by the measures employed to restrain the dispersion of the bacillus. Truly through the knowledge that has been acquired during the last few years an immense power has been placed in our hands for doing good to our fellow creatures. But the prevention of the spread of disease, the lines of procedure for effecting which we have been taught, is only one of the services rendered to us by bacteriological science. In the early days of bacteriology it was

found that the bacillus might be brought into a weakened state, and that if introduced into the system by inoculation in this state it only produced a mild form of affection unattended with danger of life instead of the ordinary form of disease. Common experience has long made us aware that a person who has passed through an attack of an infectious disorder is not liable to the same extent as before to contract the disease on exposure to contagion, and that should he contract it the course run will assume a mild character. Out of these two factors we get command of some moment in the direction of providing escape from serious effects arising from the disease. Two modes of bringing the bacillus into an attenuated state are open for employment; one by conducting their artificial cultivation in a particular way, the other by transmission through the system of an animal differing in nature from that in which the disease naturally occurs. The latter is represented by the system of dealing with small-pox, which started with Jenner at the close of the last century. Jenner's discovery consisted in showing that vaccination with the lymph of cow-pox affords as much protection against small-pox as an attack of small-pox itself. He knew nothing about the virus of small-pox being attenuated by passage through the system of the cow. Another method of combating disease, more recently revealed by the teachings of bacteriology, is by availing ourselves of the efforts of Nature to counteract the effects of the bacillus.

In the case of some affections it has been made out that the pernicious results are due not to the direct action of the bacillus, but to the development of an agent by its growth which act in the manner of a poison to the system. This material, known as toxin, on being produced leads to the generation in the system, by, as it were, a conservative effort of Nature of a counteracting principle which has received the name of antitoxin. We have the poison and its antidote to deal with, and the result may be considered to be dependent upon which is the stronger of the two. This is valuable information to have obtained, and no one can conjecture how much more remains to be disclosed by the further prosecution of research. It follows that what is wanted for subduing the disease is a supply of antitoxin, and this it has been found may be obtained from the lower animals. It is the toxin which leads to the generation of antitoxin, and toxin is produced by the bacillus, no matter whether it exists inside the system or is cultivated in a medium outside the body. Produced as the result of cultivation outside the body it is susceptible of separation by filtration from the bacillus, and in this state the effect of its introduction into the system of one of the lower animals is to kill if used in sufficient quantity, and in smaller quantity to give rise to the production of antitoxin, which, with suitable arrangements, may be procured in a form to be susceptible of employment as a therapeutic agent.

Here lies the principle of the modern treatment of diphtheria by the serum of the blood of the horse rendered charged with antitoxin by the repeated introduction of a suitable quantity of toxin into its system.—F. W. Pavy, M.D., in *Med. Press.*

HYSTERIA.

There is nothing of special interest in the previous personal or family history of this patient. She is a girl of eighteen years, who was brought into the hospital as the result of an accident. She arose one night to quench her thirst and drank from what she supposed to be a glass of water, but which in reality contained a large amount of laudanum. The effects of the drug were almost immediately manifest, the alarm was given, the ambulance surgeon was summoned, who gave an emetic and emptied her stomach so promptly that she showed no very serious results of this accidental poisoning, although she had swallowed enough laudanum to have balanced her accounts then and there. She was brought to the hospital suffering chiefly from shock and nervous excitement and is now recovering from them.

You will ask, then, what there is about the case of interest. As the result of this shock and the fear of death, the girl has developed certain functional nervous symptoms which are characteristic. Her manner became somewhat excited, her behavior somewhat unnatural, on her body were areas which were highly hyperæsthetic and certain other areas which were anæsthesic, the anæsthesia affecting in particular one side of the face. In a case of this sort, with the history of poisoning and the development of nervous symptoms one might be led astray were it not for these particular symptoms of anæsthesia and hyperæsthesia. On the left side of the forehead she says she feels nothing at all, although, as you can see, I prick her so deeply that the pin hangs in the flesh. On the right side she feels perfectly, When I examined her in the ward two days ago, it was the right side that was anæsthetic while sensation was normal on the left side. Now, as I rub my finger over the right conjunctivita she does not feel it, nor did she at the previous examination. This is, therefore, not a case of unilateral anæsthesia today, although it was when I examined her in the ward. I am glad that this fact has been brought to our attention, for I might otherwise have given you the impression that such anæsthesia or hyperæsthesia was always unilateral, as is often the case. The left conjunctiva seems perfectly normal in sensation, although the left side of the fore-

head is anæsthetic. Sensibility is good in both hands. I just touch the back of her neck with the pin but she complains of pain, showing that there is hyperæsthesia at that point.

This disease—for this condition is truly a disease—is illustrated in the patient in a light form. Her symptoms have been limited to a varying anæsthesia and hyperæsthesia and a general excitement. This disease may be marked simply by the latter symptom or by a flood of tears, an uncontrollable fit of laughter, or it may be, by persistent vomiting, by constipation, by the voiding of a large amount of pale urine, sometimes even gallons being passed in the twenty-four hours. Sometimes it is manifested merely by excessive sweating, perhaps limited to one part of the body. There may be coldness, or a local or general increase of temperature: for example, I have known the temperature of the body to be raised to 114° F. with no other cause than hysteria. These manifestations may last for a lifetime or may subside. A little while ago I showed you a girl who had suffered from a brutal attack by her husband. She came here supposed to be affected in the brain or spinal cord, for she had a right hemiplegia without, however, disturbance of speech. She made a good recovery with no medication save the injection per rectum of asafœtida in large quantities and by a little mental treatment; insisting that she could walk, helping, encouraging and urging her to do so. She lost her temper one day without any reason and left the hospital on foot.

The paralyses which occur in the course of this disease are sometimes very permanent, sometimes accompanied by convulsions; or there may be convulsions without paralysis. Marked psychic disturbances may occur, such as delusions, hallucinations, mental perversions or peculiar disturbances, in which the patient goes into the condition known as catalepsy. Such patients are apt to be sleep-walkers.

For this mild case, I shall prescribe asafœtida. The simple nervines like asafœtida and valerian with such tonics as phosphorus, arsenic and iron are usually all that are necessary but, at the same time it must not be thought that the trouble is a trivial one simply because its essential element is the lack of power to control the nervous system. If the asafœtida cannot be administered by the mouth, we will give it by the rectum, using four ounces of the mixture at an injection. It should be introduced through the flexible tube with the patient lying on the right side so as to have the fluid gravitate into the tranverse colon. If the large quantity is not retained, we can use an ounce or two more frequently. We might give half an ounce of mistura asafœtida by the mouth, or we might give the pill of asafœtida and soap in ten grain doses three times a day. A good treatment for the control of violent patients is the injection into the bowel of chloral and asafœtida. Chloral is the best drug for the immediate relief of the acute attacks of this disease when there are convulsions or violent behavior.. Chloral, however, is not a safe remedy to continue because it is too depressing. Valerian, asafœtida, sumbul and other drugs of this class may be kept up indefinitely without harm, so far as I know. The use of the cold bath, especially of the cold spinal douche, of general faradization or of static electricity may be indicated. Along with these methods of therapeusis, there is need of psychical treatment, not allowing too tender or too harsh usage at home, neither ridiculing or expressing too great sympathy for the patient, but enforcing a somewhat rigid and, so to speak, tonic mental treatment. Unfortunately, cases of this disease occur most frequently in the ignorant and in those in the lower walks of life, in persons whose mental and moral training is not of the highest kind, and whose minds are easily unbalanced by unnatural excitement or by some trivial occurrence. But although these are the persons most commonly affected, we may find hysteria in any walk of life. When it occurs in persons apparently so situated that we would expect them to be free from it there is usually a neurotic element in the family. There may be a history of insanity, of epilepsy, of chorea, or of sleep-walking, nightmare, or some other curious nervous disturbance; possibly that which goes by the name of neurasthenia.—Dr. Stockton, in *Med. and Surg. Rep.*

HOT WEATHER AND HABILIMENTS: A HYGIENIC HOMILY.

As the preparations for the September number of the Magazine are made during the heating, humidity-provoking days of August, the question of clothing, however scant, cannot be made light of. It would be altogether too frivolous and, to the most of us, devoid of interest to follow the leading of a morning's patient and "think about the fall sewing." But a consideration of the hygiene of clothing, of hot weather clothing, is *apropos* and professional withal. A charmingly written book, entitled "The Bishop's Conversion," relates, among other notions of the worthy bishop while in India, that he did not propose to use the pith-lined helmet and the sun-umbrella: the natives did not, why should he? Soon, however, the throbbing head and the inability to work caused him to repent and turn from the error of his ways. It is not necessary, however, to go as far as Hindostan to obtain exambles of unhygienic methods of clothing one's self during the heated term. Indeed this line of thought was suggested by a personal letter to the writer and he can no better than to take

his readers in his confidence and let them share the good things.

"I am meditating on the abominations of *Starched Shirt Fronts.* Who invented them? or how were they evoluted? Any one—every one—of us who has revelled at sea, by the shore, or in the freedom of camp life, in the luxury of a porous, light and not too warm flannel shirt, knows how good it is to be delivered from the bondage and oppression of the "biled shirt" with its sheet-iron rigidity and glossy luster, good enough when fresh for show, but so quickly collecting and exhibiting all manner of spots, dusty, greasy, or loaded with chance planted bacterial colonies, creased, crumpled and soaked with grimy sweat, after the least amount of active exertion, so that in a few hours you hate the nasty thing, as you tear yourself out of it and consign it to the tender mercies of the mangle of the Irishwoman or the industrious Chinaman.

"Can such a thing be healthy to wear for a few hours? Think of the check of natural transpiration as the accumulating drops roll down your chest—think of the sour smell that makes you hate yourself, and rush incontinently into the bath-tub or the river to open once more the pores which kind mother nature has sprinkled as so many breathing holes all over our skin—and then I think you will agree with me that the Starched Shirt Front is for men such an instrument of torture as only Dame Fashion could have invented or induced us to endure, just as she imposes like a straight-jacket a corset upon women.

"Nor is this all. Behind an immaculate shirt front what may not lie concealed? For my part I have learned to look with suspicion on the man whose expansiveness of white seems to say, 'Come, gaze upon the purity of my heart and life. You will find all sweet and clean and fresh within—plenty of room for all swelling emotions.' I cannot help thinking how much may lie hidden there—how often the fairest outer seeming can cover the deepest hypocrisy. Is there no covert allusion in the very name of the substitute for a clean shirt—the *sham*

"the things
Th' indignant laundress blushes as she brings?"

"But this would lead me too far a-field on this hot day, and I will go back in thought to the good old times when knights-errant rode through green glades and forests in quest of forlorn damsels, armed cap-a-pie in their sheet-iron helmets and armor. How much better off are we in our plug hats and starched shirts? An old brave and hardy race of sea-rovers, the Berserkers—or bare-sarkers—the naked shirt wearers, drove them into the land of illusion and song, and there all the dudes of the present day will have to follow them when once we have been awakened to the knowledge of the free and healthy life gained by abandoning the fetter of the starched shirt.

"Our ancestors had it and enjoyed it, too. Think of some of the old-fashioned gentlemen you have known, with a plain unstarched shirt, loose in the collar or unbuttoned perhaps, and of the manly heavings of the chest showing the ample movement of heart and lung; think of the ruddy glow of health in the sunburnt cheek and cheery eye, and ask yourself whether they were not better specimens than most of the tailor-made men you meet in your walks to-day? Allowance, however, must be made for the love of adornment—something to mark one somehow from the common herd—and so to the simple shirt-front came to be prefixed those gorgeous frills which we see in the portraits of the worthies of a hundred years ago, perhaps a few of us may remember a survival or two among the friends of our youthful days with a mirthful thought of the turkey-cock appearance presented by the wearer of a well-ruffled shirt. But after all, how much more sensible was such a mode of adornment—of 'putting on the frills'—which left amidst them all free ventilation through the texture of the shirt, than our method of encasing ourselves in impervious board-like fronts, keeping close to us all the matters Nature would have us rid ourselves of, and excluding the healthy life-giving breeze from any chance contact with our skin?

"Some have wondered at the impunity with which women bear exposure to temperature and inclement weather. May it not be that in spite of the corset they are less severely handicapped in comparison with us in our decorous *starched shirts?*

"It is too hot to pursue the subject further just now. But think about it and see if it is not time to start a crusade against our present dress in the interests of hygiene and happiness!"—*Ed. in Lehigh Valley Med. Jour.*

SULPHONAL AND TRIONAL COMPARED.

During the last few years several hypnotics, differing in value, have been introduced to the profession. Among the drugs of this class, two, sulphonal and trional, deserve especial favor; and it may be interesting briefly to compare them, as they both give good results, yet differ so much in their effect that it is well to know to what class of patients each is the more suitable.

Sulphonal is sparingly soluble in cold water, and is slow in its action. Sometimes as long as two or three hours are required for it to induce sleep. So slow is it at times that patients become impatient waiting for its effect, hence it is better to give it in the evening a while before bedtime. I have sometimes thought that the slowness of its action interfered with the induction of sleep, the

patient becoming so nervous waiting for sleep that he was thoroughly aroused. The effect of a full dose, however, continues long; and it will often produce sleep the second night, and in a few cases even the third.

Trional is much more soluble. It produces sleep much more quickly, within a few minutes. In one case the drug was taken before preparing for bed, and its effect was felt so soon that it was an effort for him to get into bed. Its action is less prolonged than that of sulphonal. I have never known it to produce sleep on the second night as markedly as sulphonal, though patients may sleep well the night after taking it, but not from its direct effect.

The day after taking sulphonal there may be great drowsiness during the day. This is less likely to occur after a dose of trional, and if it does is much less intense.

In consequence of the more rapid action of trional, some patients much prefer it to the more slowly acting sulphonal. This is especially true of those who have difficulty in getting to sleep when they first go to bed. Those who suffer from this form of insomnia become impatient at their inability to sleep, and each minute finds them more restless; indeed, it is in part owing to this restless nervousness that they are unable to get to sleep, and for this reason they are desirous of seeing an early result from any medicine they take. To such patients it may be well to give trional.

Another class of patients have no difficulty in going to sleep when they first go to bed; but they wake in a short time and lie awake two, three or four hours, or may have no more sleep that night. To this class sulphonal is the betttr drug, as it does not interfere with the first early sleep of the night, and acts later so that the patient does not wake at midnight as usual.

The effects of trional do not continue so long towards morning as sulphonal. It gives good refreshing sleep for four or five hours, or perhaps six; then the patient wakes and does not sleep again. In such cases it is possible that the next time a larger dose will produce a longer sleep. The effects of sulphonal are more likely to continue through the whole night until morning.

The dose of either of these drugs is ten or twenty grains. In many cases ten grains are sufficient, but where there has been obstinate wakefulness it is better to give more, fifteen or twenty grains. I have only very rarely given thirty grains of sulphonal. I have never had occasion to give more than twenty grains of trional; possibly not having tried it in such obstinate cases as the other drug. In the case of either drug it is better to give one sufficient dose than to give two or more insufficient doses.

After taking sulphonal there is not infrequently more or less cerebral heaviness and distress the next day. In a few cases the discomfort has been so great that patients have objected to taking the medicine, and preferred to get along with less sleep. I have found much less of this unpleasant effect after trional. One patient, who refused to take sulphonal on account of this after-effect, had little or no discomfort after a dose of trional.

After fifteen or even ten grain doses of trional, I have known slight vertigo or dizziness to be felt before sleep was induced, if the patient rose from bed, lying down caused this to cease; but for a short time it was somewhat distressing. I do not remember this after the ingestion of sulphonal. It may be well, therefore, to warn some patients not be rise after taking trional, to wait until fully ready for the night before taking it, and then to stay in bed without getting up so as to avoid this unpleasant experience.

Sulphonal may be given in small doses, not more than five grains, to quiet restlessness in neurasthenia, hysteria and mania; given three times a day and, if necessary, during the night, it will often have a most soothing effect. I have not tried trional in this way, but should not expect such an effect, as it acts so much more quickly and its action is so much less lasting.

It will be readily seen from this comparison which of these two drugs to choose in combating insomnia; but it must be remembered that neither is a certain cure for this distressing symptom, and that the treatment must be directed to the patient's condition and not simply to the symptom insomnia.—S. G. Webber, M.D., in *Boston Med. and Surg. Jour.*

Laryngeal Tubercle.—At the late meeting of the British Laryngological Society, Dr. Theodor Heryng, of Warsaw, whose name is well known to most of the profession, contributed a valuable paper on the surgical treatment of laryngeal tuberculosis. As this paper contained the latest work on the subject, the conclusions thereof cannot fail to be of interest and value to our readers. Dr. Heryng considers that tubercle of the larynx may heal spontaneously, chiefly in cases of ulceration of the vocal cords and posterior wall; very rarely the more serious cases, with infiltration and deep ulceration, or implicating the cartilage, or accompanied with aphonia and severe dysphagia leading to rapid disintegration. He divides the general treatment into hygienic, dietetic, and climatic. The indication is the removal of dysphagia, and, in severe cases, the relief of dyspnœa; next, the recovery of the voice. The cure of deep ulcers with inflamed and thickened bases, and surrounded by proliferation products, and certain cases of chronic laryngeal tuberculosis, is most quickly effected by surgical means. The indications for surgical treatment given by Dr. Heryng

are as follows :—1. Tuberculomas of the epiglottis ; 2. Stationary tumor-like infiltrations of the posterior wall ; 3. Chronic tumors with inflamed bases which resist other treatment, and 4. Partial disease of the larynx. The contra-indications are : 1. Advanced pulmonary disease, with hectic and wasting ; 2. Diffuse miliary tubercle of larynx, or larynx and pharynx ; 3. Cachexia ; 4. Severe stenosis due to inflammatory infiltration ; 5. Nervous patients and those where there is little hope of recovery. The cause of recurrence after operation is threefold, inaccessibility of the parts and imperfect removal, the third, and most important, being, however, extension of the disease to the lungs, and inefficient resistance of the parts. Dr. Heryng uses curettes specially devised by him, and removes as much of the affected parts as possible at one sitting. The conditions favorable to successful surgical treatment are : the local character of the disease, its extent and character, the general state of the patient, his nutrition and strength, the parts of the lung affected, the age, constitution, circumstances, etc., of the patient, the thoroughness of the operation, and the after treatment. Most patients with laryngeal phthisis die of pulmonary phthisis, and a large number of temporarily cured cases are menaced with recurrence, but proof is not wanting that in rare instances complete recovery has been obtained, while partial cures have proved lasting, and dysphagia, dysphonia, and dyspnœa can be relieved, and these complications we are better able to treat now than formerly. Serious hæmorrhage is rare and can be treated. In surgically treating laryngeal tuberculosis not only must the operator be possessed of special skill and knowledge, but both he and his patient must be prepared to persevere and be patient. Severe cases require to be treated under special climatic conditions. In concluding his essay, Dr. Heryng remarked that the power of large tubercular deposits to become absorbed, and extensive laryngeal ulcers of healing with complete restoration of voice, is proved both by clinical results and by microscopical and anatomical observation. Before we close there is one factor in the surgical treatment of diseases like laryngeal phthisis to which attention should be drawn, and that is the racial factor. The French, the Americans, and the English are people who, on the whole, tolerate operations badly, being, as they are, of highly nervous temperaments. On the other hand, the Germans and most oriental races are, to a considerable degree, insusceptible to such procedures, hence the better success reported in severe operations by surgeons used to dealing with these races.—*Hosp. Gaz.*

THE EAR IN THE EXANTHEMATA.—Among the pereventable diseases, which have so often been allowed to gain ground through neglect at their first onset, may be counted otitis media suppurativa following the exanthemata. The aural surgeon meets such cases every day, and more often than not they have been neglected by parents because they believed in the absurd and ignorant fallacy that the patient "would grow out of it." Now, thanks to the improvement in the education of the general public, we may hope that these cases will become less in number, and that some of the more alarming comlications of exanthematous otitis media may be met with less often. Quoting recent statistics, it may be may said that out of 501 cases of middle-ear disease in children, 131 originated during an attack of measles, 63 during scarlet fever, 147 owed their origin to catarrh, and 101 to teething ; so that it will be seen that some two-fifths arise in measles and scarlet fever. Now, without going deeply into symptomatology, it is only necessary to point out how these diseases give rise to pharyngeal troubles, causing blocking of the Eustachian tubes, and the accumulation of secretion in the tympanum. Since the Eustachian tubes drain better in the upright than the recumbent position, the child suffering from measles or scarlet fever is placed at a further disadvantage, as pointed out by Walker Downie, who consequently insists upon the frequent and strong use of the pocket-handkerchief to keep the nose and naso-pharynx free from the very beginning of the illness, when there are catarrhal symptoms. If the child is too young, politzerization can always take the place of the handkerchief. The pent-up secretion in the tympanum gives rise to considerable pain, and if this be not relieved by the means just mentioned, the risks of future otorrhœa can be best avoided by paracentesis of the membrana tympani. If done at the lower and posterior part of the membrane, with a shouldered myringotome under proper focal illumination, the child's head being securely held, this little operation is perfectly safe and simple, and the wound readily heals. If the patient be the subject of adenoids, these must be left until recovery from the exanthem. It cannot be too deeply and strongly impressed upon the public that it is during the primary febrile disease that the ear requires care, and that a discharge from that organ during measles, scarlet fever, or small-pox, means culpable neglect and carelessness. Inquiries as to the ear should be made at every visit, and an occasional examination with a speculum insisted upon. Further, when earache is complained of, it is by the simple and scientific methods mentioned above that relief must be afforded, and the ear (perhaps also the life) saved, and not by the palliative means of blisters or leeches.—*Med. Times.*

CHLOROFORM-ANESTHESIA. — As a result of a study of the question of chloroform-anesthesia, Brunton (*Lancet,*) has arrived at the following

conclusions: Experiments on animals have conclusively shown that chloroform given by inhalation and not blown artificially into the lungs kills by paralyzing the respiration. Clinical observation has shown that cases of simple danger without death during anesthesia are due to failure of the respiration. Cases of death may arise from the same cause, but may also be due to stoppage of the heart (syncope) or to stoppage of the heart and respiration together (neuroparalysis). The most common cause in neuroparalysis has been found by Caspar to be throttling, strangling, and drowning, which kill by neuroparalysis as often as by asphyxia. Anesthetics have no tendency to produce neuroparalysis except when they are given in such a manner as to irritate the respiratory passages, either mechanically or chemically. On the contrary, they tend to lessen shock. During imperfect anesthesia, both at the very commencement of administration of an anethesia or during recovery from its influence, choking may occur and cause death by neuroparalysis as well as by asphyxia. The neuroparalysis is the result that is most to be dreaded, as simple asphyxia may usually be recovered from if artificial respiration be maintained. It is, therefore, most important in the administration of anasthetics to avoid anything that is likely to interfere with respiration, as such interference may act like throttling and cause death by neuroparalysis. During complete anesthesia, the reflexes being almost or entirely abolished, there is little risk of neuroparalysis, but the nerve-centers being weak there is more of asphyxia. At the commencement of administration and during recovery, when the reflexes are present but may be deranged, the danger of death from neuroparalysis is greatest, and the respiration then requires to be watched with especial care. Although there may be no objection to the anesthetist keeping his finger on the temporal artery, and thus unconsciously watching the pulse, yet the respiration must be his main care, and anything that will withdraw his attention from it is studiously to be avoided.—*Med. News.*

An Additional Note on the Use of Bromoform in the Treatment of Whooping-Cough.—In the *Polyclinic* for January 16, 1894, I reported a number of cases of pertussis treated with bromoform, and gave a short description of the drug. Since that time I have used the remedy in quite a number of cases, and usually with most marked improvement in the condition of the patient. In some instances the disease was influenced in a very favorable manner, the paroxysms being greatly reduced both in frequency and intensity, showing that the drug was capable of exerting a very powerful influence upon the course and duration of the disease. As I said at that time, the good effect is partly, at least, due to its acting as a local anesthetic upon the pharyngo-laryngeal mucous membrane. As a rule, I begin the treatment with two-drop doses every four hours, to a child of two years, increasing this somewhat if necessary. Bad effects are never seen from small doses and large ones rarely produce narcosis. As a rule, bromoform will stop the vomiting within a few hours, and I have known it to relieve children who were rapidly losing ground on account of their inability to retain sufficient food to nourish them, and to relieve them to such an extent that they promptly regained strength. In a few instances it has checked the disease while in the full vigor of the paroxysmal stage. The duration of the treatment was from two to four weeks. The drug must not be stopped too soon, as a relapse might occur. About seventy-five per cent. of the cases recovered within one to three weeks. I do not claim bromoform to be a specific, but I believe it will give better results than any other treatment we know of to-day for this dangerous and distressing disease. After the paroxysms have diminished a change of air, especially sea-air, is most beneficial; in some cases often acting like "magic."

As bromoform is but slightly soluble in water, it is best to add some alcohol to the solution, giving it in the following manner:

R.—Bromoform	48 drops.
Rectified spirit	4 fl. drs.
Distilled water	1 fl. oz.
Sirup tolu, sufficient to make	3 fl. ozs.—M.

Dose.—1 fl. dr. in water every four hours.

Bromoform is difficult to drop. It may be given dropped on sugar, or in water. Let the requisite number of drops fall into a spoonful of water. The bromoform sinks to the bottom of the liquid and collects there in the form of a pearl. Care must be taken that the pearl is swallowed. The taste is scarcely perceptible. It must be remembered that bromoform is very volatile and decomposes readily. It should, therefore, be kept in closed bottles and protected from the light.—Dr. Carpenter, in *Phila. Polyclinic.*

The New Specific for Cancer.—Emmerich and Scholl (*Deutsche Med. Wochenschrift*), report the results of their new treatment for carcinoma. They use the serum of sheep which have been inoculated with cultures of the streptococcus pyogenes. This is filtered through porcelain and kept in small tubes. Emmerich was led to experiment with this serum by saying that the serum of rabbits, which had been infected with the streptococcus, was decidedly antagonistic to the anthrax bacillus, and before Behring and Kitasato published their first results with the serum therapeutics of tetanus and diphtheria. Six cases are reported to show the results of the cancer serum treatment; and while none of them are old enough to

be sure that a radical cure has been effected, some of the histories are really amazing. The following is the most striking: Marie Aubet, *æt.* 54; turned over to Emmerich as inoperable. Two years before, the breast had been amputated for carcinoma, now has a return of the trouble in the shape of a tumor in the scar, the size of a pigeon's egg; another under the arm, still larger; the whole infra-clavicular region hard as a board, with a fistula leading from this infiltration into the axilla; several tumors the size of walnuts and hazel nuts, in the neck; the arm swollen, œdematous, and totally disabled. After the injection of 0.5 ccm. of the serum into the tumor of the breast, on two successive days, the tumor was reduced to half its original size, and on the third day after two ccm. in all had been injected into it, this tumor disappeared entirely. In the meantime small amounts of the serum (0.5-2 ccm.) were injected into the tumor of the axilla and the subclavicular infiltration, and four days after the commencement of the treatment, the infiltration had almost entirely disappeared, and the arm had become so nearly normal as to be used freely. Fluctuation now became perceptible in the axillar tumor and a tablespoonful of pus was evacuated from it by incision. The treatment was continued and in twenty-five days from the beginning, the axillar tumor was entirely gone and the fistula closed. In four days more the patient left the hospital temporarily with no evidence of persisting disease beyond a few scarcely perceptible nodules in the neck. The full amount of serum used in this case was 40 ccm. Interest is in the fact that after the infra-clavicular infiltration disappeared, the clavicle was broken by the movements of the arm; showing that the bone had been partly absorbed, and when deprived of the support given by the carcinomatous tissue, it could not stand the strains of ordinary usage. Whether or not the cure proves to be a permanent one in this case there can be little doubt that the serum will have prolonged her life.

The authors say that their serum is much more difficult to prepare than that for diphtheria, though from the description of the method it would seem to need far less accurate experimentation.—*Omaha Clinic.*

The Digestion of Starchy Food in Infants.—The news comes from Berlin that Prof. Heubner has recently made some experiments on the digestion of starchy foods in young infants. He starts out with the statement that it is generally believed that infants under six months of age cannot digest farinaceous food. The question is, whether the saliva of the infant is secreted in sufficient amount to be of any practical benefit. Schiffer made one series of experiments, collecting the saliva from the mouths of twenty-eight infants, the children all being under nine days old. Twenty-seven of these experiments gave positive results of the power of the saliva to convert starch into sugar. Another interesting series of experiments was conducted by obtaining an extract from the salivary glands as quickly as possible after the death of the infant. Traces of ptyaline were found in these glands in a child only one day old. This is quite remarkable, when it is also stated that not a trace of ptyaline was found in the pancreas, even when the children were three weeks old. From these experiments, it is safe to conclude that children only a few weeks old secrete a material capable of changing the starch into sugar. The reason why starchy food has been withheld from infants appears to be due to some prejudice, rather than to physiological facts. Jacobi prescribes one part of milk with five parts of barley meal, leading one to conclude that he thinks the starch in the meal is digested, or he would not prescribe it. Dr. Kafters, of Leipsic, made some extensive experiments by feeding young children with starchy foods, and then analyzing the fæces to ascertain what per cent. of starch passed through the body undigested. These experiments also confirmed the above statements that young children and infants have this power to digest starchy foods. Practically, however, it appears to be wise not to feed a child too much of this starchy food, to the exclusion of other diet, because the bulk of this starchy diet would be too large to be convenient. The point, however, is brought out clearly, that nature has supplied even the youngest child with all the power necessary for the conversion of starch into sugar. Evidently she is not afraid that the absorption of glucose will cause diabetes! The pseudo-scientists who so persistently advocated this idea not long ago, now find themselves without a single rock on which to stand.—*St. Louis Med. and Surg. Jour.*

Lightning Stroke.—The indifference with which the inhabitants of large cities pursue their business during the most "terrific" thunderstorms, unmoved by any feeling of danger and inconvenienced only by the rain, contrasts strongly with the awe with which the countryman contemplates the passing storm, and the precautions, almost superstitious in mountainous and moorland districts, which he takes with the view of avoiding a thunderstroke. But the different attitudes are fully justified by facts, the deaths from lightning among the urban populations being far fewer than those caused by runaway horses; for chimneys, church towers, telegraph posts and wires all serve to divert and divide the currents, so that even when one or other is struck the accident is rarely attended by any loss of life, and the streets are among the safest places in a storm. In the country it is quite otherwise; the chimneys of

isolated houses, the trees surrounding a homestead, the hedgerow, the barn, the stack under which a man takes shelter, or his own person if he be overtaken in the open, act as so many conductors to attract and concentrate the spark—indeed, the solitary traveller or field laborer is less exposed to danger under trees than when he presents the only "point" in a wide "plane." Dr. Brämer, who has endeavored to collect and tabulate the circumstances of all deaths from lightning in Germany during the last fifty years, finds that they have been nearly trebled in that period, a phenomenon which he attributes to the increased activity as well as numbers of the rural population. Village churches and schools contribute a remarkable excess of accidents during the hours of service or instruction, as if the aggregation of a number of human beings intensified the danger, possibly by the internal air current set up. The metal bells might also attract, and the old practice of ringing the church bells during storms has of late years been discontinued; while both causes, the massing of men and of steel, concur to render military encampments peculiarly liable. One-third of the annual average of accdents occurs in July, and the afternoon, or 3 to 4 p.m., gives the highest, and the corresponding period of 3 to 9 a.m. the lowest, number, the actual maximum being reached between 3 and 9 p.m., although the six hours immediately preceding—viz., 9 a.m. to 3 p.m.—contribute fewer than the midnight watches of 9 p.m. to 3 a.m. The popular fear of causing movements or currents of air by driving or running is not unreasonable, but the continuous series of telegraph posts and wires, and of metal rails, render a railway train about the safest possible refuge in a storm.—*Lancet.*

The Treatment of Diabetes Mellitus.—Robin (*Brit. Med. Jour.*) describes in detail the medical treatment—"alternating treatment"—which he prescribes in diabetes. He believes that in this disease there is an increased activity of the chemical changes of general nutrition, and of the hepatic cells in particular, which is the result of increased activity of these general changes by acting primarily on the nervous system. The treatment is divided into three stages: 1. For four days a powder, containing about fifteen grains of antipyrin and eight grains of sodium bicarbonate, is given twice a day. In addition cod liver oil is taken twice a day with the meals, and Seignette salt as a morning purgative. 2. At the end of four or five days the antipyrin is discontinued, and sulphate of quinine prescribed—about six grains in a cachet at the midday meal. This is taken for six days, then discontinued for four days, and afterwards taken again for six days. Before the morning and evening meals a cachet is recommended containing arseniate of soda, carbonate of lithium, and codeia. 3. After fifteen days these drugs are discontinued, and the author prescribes, for ten days, a pill containing opium, belladonna, and valerian. The cod liver oil is discontinued, and the patient is allowed to drink a weak solution of bicarbonate of soda (1 in 125). In the case of nervous women, or if there should be intolerance of the opium and belladonna pills, fifteen grains of potassium bromide are given two or three times a day for eight days. In addition to the medical treatment the diet is regulated. On account of the loss of inorganic salts in diabetes (demineralization) the author recommends the food to be well salted; to supply potassium salts advises green vegetables, especially cabbage and endive, and also a weak solution of potassium tartrate to dilute the wine taken at meals; and to counteract the loss of phosphates of magnesium and calcium he prescribes glycero-phosphates of lime and magnesia. He also recommends bouillon on account of the inorganic salts which it contains. If sugar is still present in the urine after the third stage of the medical treatment above mentioned the course is recommenced. After a second course, whether sugar has disappeared or not, the drugs are discontinued for one month. Robin has treated by his alternating method 100 cases of diabetes, in each of which the daily quantity of sugar excreted was 100 grammes or more. In 24 of these recovery has occurred; in 25 recovery is still doubtful; in 33 there has been considerable and permanent improvement; in 18 the results have been negative.

A Simple Expedient for the Treatment of Nocturnal Enuresis.—Stumpf, in the *Münchener med. Wochenschrift* for June 11th gives an account of a simple and apparently rational expedient which he has successfully adopted in the treatment of nocturnal enuresis, especially in older children. He was led to try it on the basis of the fact that the passage of even a few drops of urine through the sphincter vesicæ excites the action of the detrusor to such an extent that the call to urinate becomes almost imperative. It is well known how difficult it is to restrain the act of urination after even a small amount of urine has passed the sphincter vesicæ and entered the urethra. His theory is that during sleep the sphincter of the bladder is apt to become relaxed, so that as the child lies horizontally in bed a little urine passes the sphincter and enters the deep urethra. The irritation of this urine causes at once strong reflex action of the detrusor, and the bladder is at once emptied in a full strong stream. It is a well-known fact that in nocturnal enuresis in children the urine does not leak away gradually but the bladder is emptied at once, a point which is in support of this theory.

In order to prevent the passage of the urine

into the urethra when the sphincter becomes relaxed during sleep a simple expedient is adopted, namely, the elevation of the pelvis, so that an accumulation of urine of ordinary amount in the bladder will gravitate back and distend the fundus, and not press against and tend to pass the sphincter. The elevation is secured by allowing the child only a single, small, flat pillow under the head, and placing one or two ordinary pillows under the thighs so that they lie at an angle of 130° to 150° with the horizontal spine.

This simple expedient was entirely successful in curing inveterate cases, one of a boy nine years, and one of a girl fifteen years old. It was then tried in twelve cases, and was uniformly successful. It was usually necessary to continue the treatment for three weeks, after which time the children were able to return to their former sleeping position without relapsing.

The writer has found it unnecessary to have recourse to the time honored measures of limiting the amount of liquids, frequent waking up during the night, etc. The chief difficulty about the treatment is to see that the children maintain the position throughout the night. Small children particularly are apt to wriggle and toss about and have to be watched, put back in position, etc. The method is therefore especially adapted to older children, in whom the position can be more easily maintained.

This method is certainly so simple and apparently so reasonable as to merit extended trial, especially as the time-honored methods of treating this pernicious habit are in so many cases unsuccessful.

It will be rather interesting if the elevation of the pelvis, which Trendelenburg introduced into abdominal surgery, and which has so extended and facilitated work in that field, should also prove of service in preventing children from wetting the bed.—*Boston Med. and Surg. Jour.*

Brilliant Results of Physiological Teaching.—The following answers were made to the questions on a paper in physiology by a candidate for a degree in medicine at a medical school not in St. Louis.

(1) What constituents of meat does a clear soup contain, and what is its nntritive value?

Clear soup contains the juice of the meat only, and its nutritive value is high in peptones, para-peptones and proteids.

(2) Explain the action of relishes and condiments.

Relishes are the principal constituents of the body and act as a nourisnment, while condiments act as a stimulant, giving to the body a stupor.

(3) What is the function of the stomach?

The function of the stomach is to digest the food after it has passed from the mouth into the large intestine.

(4) What is the difference between blood-serum and blood-plasma?

After the blood has been drawn and stood until it has coagulated, a thick mass is formed on the top called blood-plasma. The fluid [*sic*] in the blood is called blood-serum.

(5) Explain the character and cause of the heart sounds.

The character of the heart sounds is a long sound preceded by a short, quick sound, resembling the sound of the words "lub dub." The cause of these sounds is flowing of the blood from aortic into tricuspid valves.

(6) What is meant by the "internal secretion" of glands? Give examples.

The internal secretion of glands is the absorption of the glands in the body. The salivary glands are absorbed in the act of swallowing the saliva in the mouth.

(7) What is glycogen? Where is it found and how does it appear to be useful.

(8) Explain the importance of afferent nerve impulses for the production of voluntary motions.

(9) Explain the phenomenon of irradiation.

(10) Give examples of anabolic processes taking place in the animal body.

(11) What is urea? Where formed? Where excreted? What is its relation to muscular work?

Urea is the principal constituent of the urine and is formed in the kidneys. It is excreted from the bladder through the urethra and thence to the penis.

(12) What is residual air? How is its amount measured?—*Boston Med. and Surg. Jour.*

Suspensio Uteri—The Proper Method of Performing it, and its Results.—Dr. Kelly refused to accept the name of ventrofixation or hysteropexy. The uterus is not fixed. He prefers the name of suspensio-uteri as more accurately describing the condition. In the past five years he has performed this operation one hundred and seventy times and thirty-seven times in the past year. The indications for the operation are extreme local discomfort associated with uterine displacements, and neurasthenia, with backache and headache. In the first class of cases, with local symptoms but no general symptoms, the operation is plain. In the last series of cases it is difficult to say just when the operation is indicated. The most brilliant cures, however, have been in this class of cases. He is willing to take the chances and fail in four cases in order to get one good cure. Of the 132 cases reported, 90 were married; and of the 78 per cent. had borne children, and 14 of them had had miscarriages. Not one died or showed bad symptoms. Transient mania has occurred in three cases, pneumonia

in one case, and stitch-abscess in three cases. Cystitis and frequent urination had occurred in four cases only, and had been but transient.

The operation is simple. The pelvis should be slightly elevated, and a small incision made just above the symphysis pubis about one and a half or two inches in length. The peritoneum is incised and drawn out with forceps. Two fingers are inserted to the fundus, and the uterus hooked up. Adhesions are stripped off with the fingers or cut with scissors or knife, and the uterus anteflexed. The abdominal wall is lifted on the left side until the peritoneum can be seen for one inch away from the line of the incision. A needle is then carried through the peritoneum, but not entering the muscular tissue, and then through the posterior uterine wall just below the fundus, taking in about one-fourth of an inch in length, and extending about one-eighth of an inch in depth. The suture is then carried to the opposite side of the abdominal wall. Another stitch is passed just above the first, near the incision, and inserted into the uterus below the other, and then carried back to the opposite side of the abdominal wall. This increases the anteflexion. A third suture may be inserted. The peritoneum is then closed by a continuous suture; then the fascia is closed and then the skin incision. The distance between the uterus and anterior abdominal wall is about one or one and one-half inches. The organ is attached by a strong fibrous cord which contains the sutures close to the abdominal wall. Pregnancy is not seriously interfered with. In only one case, and that after two years, did the uterus drop back.—Kelly, in *Jour. of Am. Med. Assoc.*

A Case in which Thirteen Feet of Intestine had been Dragged Through a Perforated Uterus and Torn Away from the Cæcum.—Dr. C. B. Nichols: I wish to report a case which I think it would be well to place on record. A few weeks ago I was called suddenly to see a lady who was said to be in great danger. She had either performed an abortion on herself or else some one had done so for her. The fœtus had been delivered but the placenta remained in the cavity of the uterus. A physician was called, who discovered something protruding from the os. and, upon investigation, found it was an intestine. There was considerable hæmorrhage and very severe pain, with the prospect of speedy death. She was removed to the "Ridge Hospital," at once. When I first saw her I found the pulse and respiration very rapid and a profound hæmorrhage from the vagina. As soon as possible, I opened the abdomen and found the uterus about the size of a five months pregnancy and very soft. The abdominal cavity was quite filled with blood. Upon lifting the uterus ont of the pelvic cavity I discovered, on the posterior surface, just above the internal os, an opening in the uterus, through which passed a loop of small intestine. I immediately withdrew the intestine. The mesentery had been stripped entirely off. One end of the intestine had been torn from its attachment to the cæcum. I inserted my finger into the cavity of the uterus and finding the placenta, delivered it, enlarging the opening. I cut off the intestine at the point where the mesentery stopped, making a lateral anastomosis with the cæcum on the opposite side. Thoroughly irrigating the cavity, I then closed the wound, finishing the operation by 6 p.m. I found that thirteen feet of the intestine had been drawn through the opening in the uterus. The patient died at 12.30 a.m., one remarkable feature being that she survived the injury and subsequent operative procedure for over eight hours.—*Occidental Med. Times.*

The Fillet in Breech Labors.—Bar. (*Arch. de Tocol. et de Gynæc.*) exhibited at the February meeting of the Paris Obstetrical and Gynæcological Society, an infant, aged 2, with a deep scar on the left groin. It limped slightly, and the right thigh was four-fiftgs of an inch short. The mother at its birth was a primipara, aged 38; the child was then very bulky, and the fillet was used, as all other means to deliver the child, especially the forceps, had failed. Bar attributed the shortening to atrophy of the head of the femur following separation of the epiphysis due to the fillet. He exhibited a similar case where he had used the fillet. A deep incised wound lay in the left groin. A crack was heard during the extraction. The wound suppurated, and the child died of pneumonia. Charpentier admitted that he had damaged both soft parts and bones even when employing the fillet with the greatest care. Gueinot always aided the traction of the instrument by passing the hollow of the hand into the concavity of the sacrum, and exercising further traction. This provoked uterine efforts. Budin added uterine expression as an aid to the fillet. Porak believed in the application of two fillets, one on each thigh. Maygrier held that the fillet should be used in dorso-anterior, and the forceps in dorso-posterior, positions. By that principle fractures are avoided. Olivier protected the fillet by enveloping it in rubber tube. In that way he had always avoided accidents.—*Brit. Med. Jour.*

Relics of Evolution.—The coccyx is one of the vestiges of our animal ancestors, says the *Scientific American*, and presents an example, perhaps, of a reversion to the older type. We are familiar with the caudal projection of the human fœtus that is like that of the animal, and we see in the dissecting room, at times, the vestiges of the tail muscles inserted into the coccyx. The *plica semi-lunaris* is a vestige of the nictitating

membrane found in certatin birds; there is the pointed ear, or the turned-down tip of the ear, of many men; the atrophied muscles, such as those that move the ear, well developed in certain people, or that shift the scalp, resembling the action of the horse in ridding himself of flies; the supra-condyloid foramen of the humerus; the vermiform appendix; the location and direction of the hair on the trunk and limbs; the dwindling wisdom teeth; the feet of the fœtus, strongly inwards, as in apes, and persisting in the early months of life, together with great mobility and a distinct projection of the great toe, at an angle from the other side of the foot; and the remarkable grasping power of the hand at birth and for a few weeks thereafter, that permits young babies to suspend the whole weight on a cane for a period varying from one-half to two minutes.

The Triumph of M. Pean.—The session of the Académie de Médecine of Paris, held January 15, was made remarkable by the presentation of a patient by M. Péan.

This patient had had a carcinoma of the larynx, and to relieve it, it was necessary for M. Péan to make entire extirpation of the larynx, the superior portion of the œsophagus and the inferior portion of the pharynx. Not only did the patient support the mutilation, but by means of a prothetic apparatus constructed by M. Michaëls, under the direction of M. Péan, the organs were replaced so that the patient could breathe, eat and drink. Not only that, but the apparatus allowed the patient to make articulate sounds, so that speech could be understood. It is two years since the patient was operated upon, and the crowning glory of the operation has been the phenomenal, nay, the brilliant success of the artificial larynx. In former times the saving of the life of a patient so afflicted would in itself have been a triumph of surgery, but to replace lost parts with apparatus of such delicacy and usefulness seems to represent an art almost superhuman.—*New. Eng. Med. Jour.*

Iodoform Injections in Joint Disease.—Ferraro (*Il Policlinico*, June 1st) reports the case of a man, aged 37, who after a long walk first noticed pain in the right knee, which was uniformly enlarged, red, and tender, and contained fluid. The joint was incised, and a considerable quantity of flaky pus let out. Two or three weeks after this, during which time the joint went on well, a small abscess formed in the upper third of the tibia; this was scraped. A similar purulent focus also appeared in the shaft of the tibia. The knee-joint became worse. The author then tried endo-articular injections of iodoform emulsions in sterilized glycerine (1-10) at intervals of twenty to twenty-five days. After each injection there was fever of maximum grade on the second or third day. The tubercle bacillus was found in the joint secretion. Slight improvement followed the injections, which were used five times, but, the patient not being satisfied, resection of the joint was finally done. It was then seen that the cavity was full of a mass of adipo-muco-fibrous connective tissue, the caseous substance being almost all gone, the osteitic foci cured or in process of cure, and the tuberculous nodules undergoing fibrous change. No bacilli were now to be found. Probably the iodoform acts by exciting a reactive inflammatory process, with formation of new connective tissue. —*Brit. Med. Jour.*

Enemata of Whites of Eggs. Memorandum. —Albumen of eggs is valuable to feed patients when other forms of nounishment can not be taken or to reinforce other nourishment. I have known patients to take the whites of eighteen eggs in one day with evident advantage, in some cases the result appearing almost life-saving.

Exhibition by the mouth is made in three ways: 1, raw; 2, raw with milk; 3, dropped in boiling water and slightly cooked.

Enemata of uncooked whites I have lately used with decided benefit. Administration by a Davidson hard rubber springe No 494, one ounce. Eggs vary in size and weight, and should be sold by weight; the albumen of an egg varies in bulk from one-half to one ounce as eggs run.

Drugs can be administered with the raw albumen; sometimes a little laudanum is needed, but rarely, to quiet bowel. Patients state that an enema relieves the faint gone feeling in stomach, and such relief is longer than when the whites are administered by the stomach.—*Am. Jour. Med. Assoc.*

Heart-Disease in Masturbators. — Bachus (*Deutsches Archiv fur klin Med.*, Bd. 54, S. 201) calls attention to an affection of the heart which he has frequently encountered in masturbators. This is characterized by pain in the cardiac region, anxiety, and frequent annoying palpitation. The heart's action is disturbed in various ways, is frequent rather than slow, usually forcible, and often irregular and unequal. The sounds may be pure, or the first sound at the apex impure, or the second aortic or pulmonary accentuated. The pulse varies with the condition of the heart. Tension and size are usually not materially altered. The cause of the alteration is not easy to determine. That it is due to the increase of work on the part of the heart seems at first sight reasonable, since it has been claimed that blood-pressure is increased during coitus, yet, on the other hand, periodic increase in the work of the heart does not usually lead to hypertrophy. The diagnosis of the condition is based partly on the anamnesis, partly on exclusion of other causes. The treat-

ment includes cessation of onanistic habits, and other unfavorable practices (tobacco, alcohol), as well as symptomatic treatment of the condition.—*Am. Jour. Med. Sci.*

Legal Control of Syphilis.—The time has certainly come, says Dr. Bulkley, when the dangers of syphilis, and especially the dangers to innocent persons, should be fully recognized. It is too late in the history of science and of humanity to stigmatize the disease as "venereal," and on that account to withhold scientific protection from thousands of innocent sufferers. Among babies, nursing women, persons infected in dental or surgical operations, and in dozens of other manners, syphilis can no more be described as a "venereal" affection than any other contagious disease. The time has come to place it under the control of the proper health officers, and make it quite *as criminal to transmit syphilis wittingly* as it is to communicate smallpox, scarlatina or diphtheria.

A Delivery-Stool in Use at the Present Time in Spain.—In the *Edinburgh Medical Journal*, page 771, 1875, Simpson describes a vessel made of strong, glazed earthenware, having a gap or opening in the anterior wall, and used at the present time by the physicians in Spain in confinement cases. This jar or stool has a wide flange upon which a patient sits, leaning forward, while the gap in the anterior wall of the jar permits necessary examinations and the expulsion of the child. Amniotic liquid and blood escape into the jar. Simpson commends this delivery-stool for its simplicity, and for the fact that it permits absolute cleanliness.—*Am. Jour. Med. Sci.*

Successful Treatment for Tapeworm.—Dr. W. B. Fletcher says: "I read in some medical journal that a dose of naphthaline would remove the various forms of tenia. I have used it now for several years with most excellent success.

℞—Naphthaline, ... 20 grains.
Chloroform, ... 1 drachm.
Glycerine, ... 4 drachms.

M.—Sig. One dose to be given four hours after a light meal.

"Six hours after give a brisk cathartic and in due time all worms pass, apparently dead."

Ingluvin.—Under this name Warner & Co., have introduced a peptic agent prepared from the gizzard of the domestic fowls and its digestive powers are alleged, by American physicians, to be very great. It comes to this country with considerable clinical endorsement as a specific for vomiting in pregnancy, as well as a powerful agent in the relief of dyspepsia and gastric disturbance. It will no doubt receive a fair trial from English practitioners.—*London Medical Record, March, 1879.*

CANADIAN MEDICAL ASSOCIATION.

The Canadian Medical Association met in Kingston, August 27th, 28th and 29th, in Queen's University. There were about 110 members present. The programme was an interesting one, containing, as it did, the names of a large number of our prominent men, as well as those of some celebrities across the line.

"Diagnosis and Treatment of Retro-displacements of the Uterus." This was the title of a paper by A Lapthorn Smith, of Montreal.

He stated that at first sight one might think there was very little to be said either concerning the diagnosis or the treatment of this condition, that it was comparatively rare and that when it did occur it caused little or no inconvenience; while in the few cases in which something had to be done, the treatment was as easy as the diagnosis. The introduction of the pessary was considered by some all that was necessary to cover the requirements of the case. All of these opinions were of course erroneous; for there were many woman not only married but single, who had been life-long sufferers, and who were still suffering because they had a displacement of the uterus which has been diagnosed, and if diagnosed not considered worth treating, or if treated, not treated in such a manner as to effect a cure. This condition, he said, was more common in married than in single women. Servant girls were often incapacited by it, brought on by a heavy lift; it was sometimes the result of a fall on the back, the fundus being thrown below the promintory of the sacrum and held there. Such a uterus might or might not be held down by adhesions. The symptoms of such a condition sometimes simulated peritonitis; the patient experiencing acute pain in the pelvis and back and being unable to pass water; the bowels and abdomen being distended and tender; all of which were immediately relieved by re-placement. Many of the cases came on slowly as the result of failing health. The round ligaments became relaxed and did not hold the uterus in place. In the parous woman the condition usually resulted from miscarriages or abnormal labors, following subinvolution. It was often traceable to the use of pad and binder. The essayist then pointed out the diagnostic points. In simple cases the treatment consisted in placing

the patient in the knee-chest position and introducing a Sims' speculum ; the air would rush in, the intestines fall towards the diaphragm and the uterus is drawn forward by suction. If the fundus was still fast, the anterior lip of the cervix should be caught with the forceps and gently drawn downward and backward to unlock the fundus. If it still assumed the faulty position there were probably adhesions due to diseases of the tubes. The vagina might then be packed with tampons of boro-glyceride, and the vagnial vault painted with Churchill's tincture of iodine, receiving from one-half to a dozen treatments. In such cases the pessary should never be used. If this failed to relieve the condition an Alexander operation, or that of ventro-fixation might be adopted, the technique of each of which the speaker described. The second was much easier and just as safe as the first. The first should be used in cases in which there was no disease of the tubes, ovaries and uterus. The second was more applicable to those cases in which inflammatory and other complications of these organs were found.

President's Address.

Dr. Bayard then delivered his address.

Though his days in this world were nearly over now, it gave him great pleasure, he said, to preside over such a body as this. The venerable President then commented upon the amazing progress made by the medical profession in Canada during the last century, and remarked that this progress was largely due to the influence of the Canadian Medical Society. Referring to the high standard which was held by the profession in Canada, higher, perhaps, than in any other part of Ameria, he ranked its members among the best citizens of the land.

"Go where you will," he said, "and you will find the physician engaged conscientiously in his work, whether it is in the houses of the rich or of he poor. It is a great honor to be a bishop, or to be a judge ; it is an honor quite as great as either of these to be a good physician."

Referring next to the work done in Canadian hospitals, Dr. Bayard said that though these excellent institutions had been originally meant for the poor and indigent, fully a half who received charity from them were able to pay.

But the philanthropic part of the physician's duty did not cease with the hospital. There was still much to be done in general sanitation. The decrease in the death-rate all over the world was very noticeable, and was undoubtedly due to the greater attention which was now being paid to sanitary science.

In view of the fact that so few physicians are able to give the time to a special study of bacteriology, and keep privately all the costly apparatus necessary for this branch of research, Dr. Bayard most strongly advised that there should be special bacteriological experts appointed by the State, or by the municipality, who would give their time to such investigation, and who might be consulted upon all bacteriological matters by the members of the general profession. To the general practitioner this would be a great convenience.

With a good deal of justly deserved satire Dr. Bayard called attention next to the spectacular exhibitions which were often made by members of the profession in medico-legal matters ; as when a number of physicians were called upon to give public testimony in court, each succeeded in arriving at a different conclusion from the others, thus affording much amusement to the public. This had been repeated with painful sameness whenever any celebrated criminal case has brought more than one physician to the witness box.

To avoid, if possible, so unsatisfactory a state of things, the President went on to advise, and most strongly, that all such medico-legal questions be brought at the time before thoroughly trained pathological experts, who would bring an intelligent familiarity with the subject to bear upon each detail. Great and unexpected advantage, both to the profession and to the public, would result from such a course, if properly carried out.

In the same spirit which he showed last year at St. John, Dr. Bayard next attacked the unscientific method still persistently adhered to in the education of children, in some parts of Canada at least. The close confinement, however careful the ventilation ; the senseless and unhealthy clothing ; the seats which they were forced to sit in ; and the insufficient exercise—all these the Doctor criticised *in extenso*, and in conclusion advised strongly that a committee be appointed to look into the matter.

The next subject taken up by Dr. Bayard was one of intense interest to the public ; and of even greater interest to the profession. Of the injurious effects of alcoholic drinks as a beverage, the doctor did not express the shadow of a doubt, but how those injurious effects could be best remedied was a matter in which he found himself in very great doubt.

Prohibition was a failure to-day as it had always been a failure. It was more than a failure, it was an impossibility. It had been an impossibility in the Garden of Eden, and its chances now were far less auspicious now than they were then.

The Gottenburg system, or State supervision of the traffic, with all profits accruing to the State, was then considered *pro.* and *con.*, and certainly

it was obvious that when the interest of the individual was taken away from the problem, and this particular merchandise dispensed without those extraneous allurements so potent with the members of the class which furnishes the greater part of the victims of the habit, much, nay, a greater part of the evil of the traffic at present noticed would be everted.

In Sweden and some other European countries where it had been tried, the system had proved, the doctor said, eminently satisfactory.

In spite of the fact that two representatives of Canadian knighthood were present, the President called attention to the sparse honors bestowed upon the profession as a whole by the Crown. The philanthropic part played by the medical profession in the life of the nation, and in the progress of civilization deserved certainly a royal guerdon more lavish, more copious, than had yet been elicited.

Finally, Dr. Bayard made a plea for greater representation of practicing physicians upon health boards, and with fuller compensation than they receive in that capacity; also for wider representation upon hospital boards, where medical men had now a very slight representation.

"Physical Culture and Training as a Therapeutic Exercise." This was the title of a paper by B. E. MacKenzie, of Toronto. It began by stating the province of gymnastics and showing in what respects they differed from athletics. The paper dealt more particularly with the form of physical development he employed in correcting varying degrees of spinal deformity. The essayist first pointed out the various causes of this species of deformity and also referred to the other evils arising from the same. The question of the modern dress of woman was discussed and a comparison made between the bust of the present day woman with that of the savage woman and with the bust of the Grecians. The cure of this condition consisted in a change of dress, massage, and drill, the patient being taught to correct her own errors. The speaker showed photographs which represented the patient before and after treatment. One photograph showed apparatus for applying force in the treatment of lateral curvature. The developmental form of treatment consisted in having the patient placed before a mirror, shown her deformity; instructed how to stand and how to move the limbs and trunk to render the deformity less apparent; put in a class and given one hour every day for gymnastic work, increasing the amount of exercise from day to day. The exercise is given to develop the muscles of the back and abdomen especially. The patient is encouraged to do her best to assume and retain the best possible attitude. Histories of cases were then cited showing how successful the treatment was when properly carried out. The doctor instanced a case of chorea treated with success by this method. The effect of the treatment on the muscular, nervous, and circulatory systems was explained. The effect on the patient's mental condition was striking. The treatment had been proposed for the correction of criminals and imbeciles by some of its enthusiastic advocates.

Dr. Louis Sayre commended Dr. McKenzie's paper and spoke highly of the treatment. He very forcibly dwelt upon the necessity of preventive measures being taken. He pointed out that the evils of spinal deformity arose from improper positions assumed in the school-rooms. He agreed that in these easy cases no splints whatever were necessary.

Dr. Reginald Sayre said that the effect of this systematic training was not only beneficial to the circulatory, nervous and muscular system and the co-ordinating power of the body, but in children he had seen the change was almost one from a mere animal to a rational being. The greatest amount of perseverance and patience was necessary to treat these cases with success, as the process was slow. One difficulty in the way of success was the difficulty of procuring suitable masseurs and instructors. Many of those who professed to be competent knew little or nothing about the correct principles and methods of treatment. This method of physical exercise he had found to be one of the most efficient in treating the atrocious deformities caused by ricketts.

Mr. I. H. Cameron read the address in surgery, taking for his subject "The Progress of Cranial Surgery. The essayist gave a historical review of the work that had been done in this department of surgery. It was only within the past twenty years that much had been done. Two of the factors in the progress of this line of work were the localization of special centres and the emphasis laid on the matter of asepsis. The matters of technique and instruments, and boldness in operating were not wanting in the older surgeons. The essayist dwelt very fully and thoroughly with the present aspects of the question. He discussed first fractures, their symptoms and appropriate treatment. Hæmorrhage was next reviewed, its varieties, symptomatology, and surgical treatment. Further subjects spoken of were abscesses, cysts and tumors. References were made to the application of surgery to diseased states of the brain. Speaking of the splendid achievements now universally accomplished in brain surgery the essayist said that these results have been made possible by the perspicacious genius, the patient and persevering investigation of one man, whose name is universally revered—Joseph Lister.

Dr. T. T. S. Harrison, of Selkirk, reported having operated on a boy in whom symptoms of

insanity were present, resulting from injury. By raising the depressed bone relief was obtained.

"Tumor of the Medulla Oblongata." Dr. J. E. Graham gave the history of a case of sarcoma found resting upon and forming a cavity in the restiform body in the left side of the medulla. The tumor was found in a married man aged 52. Eight years previous he had suffered from typhoid, the fever running very high. Patient never felt as well as before. Three years ago he had rheumatism for three months, followed by a mitral murmur. One year ago he had la grippe. The commencement of his illness was marked by an attack of fainting. Falling backward he received a blow on his back, on a line a little below the occipital protuberance. This attack was accompanied with nausea. His general health continued to fail gradually. He experienced great thirst at times. In February last he noticed that the left side of his face was numb; the same condition was experienced in the left thumb, the numbness extending to the left neck, arm and forearm. Complaint was made of headache in the occipital region. He also complained of vertigo and vomiting. The lungs began to undergo consolidation. Death followed. The tumor was removed, *post mortem*, and proved to be a sarcoma of the round-celled variety. Diagrams were then exhibited, showing the position of the tumor. The reader of the paper then went into the bibliography of the subject.

Dr. E. Buller, of Montreal, then read a paper on the "Removal of the Membrania Sympani and the Ossicles." This operation had been found to be one of great benefit in catarrhal otitis media, and was now a recognized surgical proceedure among the profession. Under the varied forms of local medication some cases of middle ear trouble were very obstinate to cure. There was considerable rigidity of the diseased parts, and the bony structures were involved in the inflammatory process, the hearing being very much impaired. The operation was a comparatively simple one, and caused little inconvenience to the patient. Even though the discharge recurred after operait was much more amenable to treatment than before. A marked improvement in the hearing followed operation.

Thursday, a.m.

The Committee on Nominations made the following report: "To the President and members of the Canadian Medical Association—Your Committee on Nominations met and appointed Sir Wm. Hingston, M.D., Montreal, Chairman, and Dr. Bray, Chatham, Secretary, and beg leave to report the following suggestions for consideration: That Dr. James Thorburn, Toronto, be President; Dr. Small, of Ottawa, Treasurer; and Dr. F. N. G. Starr, of Toronto, General Secretary. That Dr. Fife Fowler, Kingston, be Vice-President of Ontario; Hon. Dr. Marciel, Quebec, be Vice-President of Quebec; Dr. W. W. White be 1st Vice-Pres. of New Brunswick; Dr. Wm. Tobin, Halifax, 1st Vice-Pres. of Nova Scotia; Dr. Chown, Winnipeg, 1st Vice-Pres. of Manitoba; Dr. Butt, Calgary, 1st Vice-Pres. of Northwest Territories; Dr. Warburton, 1st Vice-Pres. of Prince Edward Island; that Dr. Matheson, of St. Mary's be Local Secretary, Ontario; Dr. McCarthy, Montreal, Local Secretary of Quebec; Dr. Christie, Local Secretary of New Brunswick; Dr. Jones, Halifax, Local Secretary of Nova Scotia; Dr. Neilson, of Manitoba, Local Secretary of Manitoba; Dr. Geo. McDonald, Local Secretary of Northwest Territories; Dr. W. H. Richardson, Local Secretary of British Columbia; Dr. H. D. Thurston, Local Secretary of Prince Edward Island.

Dr. Roddick, of Montreal, presented the following report: The Committee appointed at the last meeting of the Association, to look into the question of Interprovincial Registration and composed as follows: Sir James Grant, Drs. Cameron and Pyne, Ottawa; Sir William Hingston, Drs. Warcil, Bausolied, Charlotte; Parke and Roddick (Chairman), Quebec; Drs. Christie and White, New Brunswick; Drs. Farrell and Muir, Nova Scotia, and Dr. Warburton from Prince Edward Island, express their regret that by the system which at present obtains a graduate in medicine entitled to practice in one province is not free to exercise his functions in all the provinces of this large but sparsely settled Dominion. That this condition of things prevents the names of medical practitioners in this Dominion being placed on the British register becoming thereby British practitioners is a boon which the Council of Medical Education of Great Britain has more than once signified its willingness to grant. With this end in view, that it is therefore considered most desirable that a uniform standard of medical education, and a uniform method of examination for the whole Dominion be established. In order to effect this purpose that the Secretary be instructed to communicate with the various Provincial Councils before the next meeting, asking that each Council discuss the position, and, if possible, appoint one or more delegates to a Dominion committee, for the purpose of adjusting a suitable curriculum to carry out the suggestion herein, and that such committee be requested to forward their finding to such of the Provincial Councils and to the Secretary of this Association before the next annual meeting.

The report was received and adopted.

Dr. Wm. Osler, of Baltimore, read the next paper on "Five Years' Experience with Cold Baths in the Treatment of Typhoid." The essayist said that he had not followed the Brandt treat-

ment exactly, but had had baths administered to most of the cases that had come under his care. The rule was to immerse the patient in a bath of 70° if the temperature ran up to 102½. This was the only treatment used unless signs of heart weakness supervened, when strychina was administered. The majority of cases received small doses of alcohol after the bath. Milk or broths and egg albumin formed the diet. In considering the statistics he was presenting, it was to be remembered, that the hospital was the repository of the worse class of cases. During the five years he had under supervision 356 cases with 25 deaths, a mortality of 7.02%. Of these 298 were bathed and 19 died, a mortality of 6.3%. The 58 unbathed cases gave a mortality of 10.2%. These latter were either mild cases, or cases with temperatures below 102½°, or cases in which severe complications were present, or cases of very high fever with weak, rapid pulse, meteorism, etc., mainly. The contention that this method of treatment wherever tried, had mitigated the general symptoms and reduced the mortality rate, his experience had fully borne out, and despite the difficulties of carrying it out, the patients feelings and the increased nursing staff necessary, he could not from a scientific standpoint give it any other than first place in treatment of typhoid.

Dr. Muir, of Truro, N.S., spoke of the difficulties of carrying this treatment out in general practice. His idea was that typhoid fever was generally over-treated. The effect of the ordinary antipyretics was very injurious to the circulatory system. One of the main points was to watch the pulse. During the past five years he had treated 159 cases with a mortality rate of 8½%. In private practice patients were seen usually much earlier than in hospital practice. For this and other reasons their statistics would differ. Most of his cases had died from bowel complications. One important point in the treatment was to avoid constipation. This he managed by administering small doses of Rochelle salts. His antipyretic was alcohol. He gave very little medicine.

A "Skin Clinic" which proved of great interest was given by Dr. J. E. Graham, of Toronto; L. Duncan, Bulkley, and A. R. Robinson, of New York. The cases were alopecia areata, psoriasis and eczema, seborrhœacum.

office

The members of the association were then treated by their Kingston brethren to a cruise among the Thousand Islands in the "America." As it was too late in the evening to assemble in the University, which was a considerable distance away, the members gathered in the Frontenac House parlor where many of them were staying and listened to papers by Dr. A. J. McCosh, of New York, on "The Operative Treatment of Injuries to the Head"; L. Duncan Bulkley, on "Some of the Newer Remedies in the treatment of Skin Diseases"; and E. Farrell, of Halifax, who delivered the address on "Medicine."

Friday, Third day.

Dr. J. C. Campbell, of Seaforth, presented a paper, the report of a case of "Dysmenorrhœa, accompanied by Anti-flexion of the Uterus and Stenosis of the Internal Os." Treatment consisted of rapid dilitation with applications to the endometrium, afterwards with galvanism, followed by laparotomy, with extirpation of both tubes and ovaries. A complete cure was effected. The ovaries presented a cystic condition.

Dr. A. R. Robinson, of New York, read a paper on "The Importance of Early Treatment of Cutaneous Cancers." The essayist shewed charts representing microscopical sections of the various cutaneous cancers, pointing out the relation of the proliferating epithelium to the connective tissue; how that the sub-epithelial tissue was very resistant to the advance of the disease; how that the vulnerability of the deeper part of the corium was much greater than that of the papillary region. The clinical course of the disease was dependent on these facts. Therefore, early thorough treatment was advisable, remembering that at the start it was only a local disease, and capable of complete cure.

Dr. Mills, of Montreal, read a paper on "Cachexia Strumipriva." The condition was shewn in two cats which the essayist presented, from which a few days before he had removed the thyroids, the symptoms being those of loss of appetite, emaciation, almost inability to walk, dyspnœa, tonic muscular spasms, and stupor. The essayist alluded to the various theories advanced as to the function of the thyroid.

Dr. C. K. Clarke, of Kingston, read a paper on "Thyroid Feeding in cases of Stupor." Such cases ordinarily were of great interest and difficult to manage. He had experimented on a good many cases. The histories of a number of the cases were given. The effects of the treatment on some seemed to be very favorable and lasting. While in one case of almost hopeless dementia improvement went on from the commencement until a perfect recovery seemed to have been attained, when suddenly, in one day, the patient relapsed completely into his former condition.

Dr. Louis Sayre, of New York, gave a clinic on "Hip Disease" on two patients.

Dr. R. A. Reeve, of Toronto, read a paper descriptive of the "Mechanism and Value of the Ophthalmometer."

Dr. J. Webster, of Kingston, reported a case of cerebral tumor causing symptoms of insanity. Removal was followed by the relief of symptoms.

A case of "Placenta with Hydatids: Fotelus with Spina Bifida" was the subject of a report by Dr. A. Bethune, of Seaforth, Ont.

Dr. R. W. Garratt, of Kingston, gave the notes of a case of "Hernia of the Vermiform Appendix." The presence of the appendix was not suspected, but on opening the inguinal canal its ruptured end presented; pus exuded from it. It was drawn down, removed, and a good recovery followed.

A case of "Transperitoneal Nephrectomy" was the title of a case read by Dr. M. J. Ahern, of Quebec. It was done for hydronephrosis due to a congenital malformation of the left ureter.

Dr. Chas. Dickson, of Toronto, gave a paper on "Some Indications for Electrolysis in Angioma and Goitre."

Dr. W. Tobin read a paper dealing with the reorganization of the Canadian Militia Medical Department, in which he advocated the adoption of the departmental in lieu of the regimental system. He also advised the formation of bearer companies, and that they should receive information in stretcher drill and instruction in the matter of first aid to the wounded.

The usual votes of thanks were then tendered.

By the pilotage of Dr. Cunningham, who was most assiduous in his cordial attentions to the visitors, the members of the Association who remained until the end of the third day, were taken to see the Penitentiary and the Rockwood asylum, and were kindly received and shown about by the Superintendents. The homelikeness of the latter institution was a matter of much comment.

Thus closed one of the happiest meetings of the Canadian Medical Association.

THE William F. Jenks Memorial Prize of five hundred dollars, under the deed of trust of Mrs. William F. Jenks, has been awarded to A. Brothers, M.D., 162 Madison Street, New York, for the best essay on "Infant Mortality During Labor, and Its Prevention." The Prize Committee also reports as highly meritorious the essay on the same subject bearing the motto, "Vade Mecum."

The writers of the unsuccessful essays can have them returned to any address they may name, by sending it and the motto which distinguished the essay to the Chairman of the Prize Committee, Horace Y. Evans, M.D., College of Physicians, Philadelphia.

DYSMENORRHŒA.—For twenty years I have used sanguinaria exclusively in the treatment of painful menstruation, Dr. Hall, *Chicago Med. Times.* I commence two weeks before the expected return of the menses, and give a teaspoonful dose three times a day and a teaspoonful on going to bed.

THE CANADA LANCET

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* DR. J. L. DAVISON, 12 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Letters and Remittances to be addressed to* ARTHUR A. ADAMS, Gen. Business Manager, 11 Colborne Street, Toronto.

AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John, N.B.; Canadian Advertising Agency, 60 Watling St London. 5 Rue de la Bourse, Paris.

TORONTO, OCTOBER, 1895.

Owing to the pressure on our columns, this month, due largely to the full and interesting report of the proceedings of the Canadian Medical Association, held recently at Kingston, we have been obliged to increase the size of our Journal, which has caused a re-arrangement of some of our pages.

TO OUR PATRONS.

With the September No. of the CANADA LANCET we began a new volume, and it is the intention of the management that this Journal during the coming year shall be in every way worthy of its past history. It will be our constant aim to present to our readers, in as concise a form as possible, the very best that the medical profession can furnish. We have much to thank our patrons for; and cordially ask their continued co-operation in keeping the LANCET in the place it has so long occupied—the leader of medical journals in Canada.

Another thing. To do this we need money. And a glance at our subscription list shows us a number of our friends who are behind; we believe not from choice, but simply from forgetfulness. It is our desire to have all subscriptions end with our journalistic year—August. In remitting will our subscribers kindly remember this, and do us this kindness. A glance at your label will make this plain—and also the fact how much you owe us. Make cheques and money orders payable to Dr. Charles Sheard, and address all business communications to Arthur A. Adams, 11 Colborne St., Toronto.

DEATH FROM ELECTRICITY.

The number of deaths from men and animals touching "live wires" draws our attention forcibly to the death-dealing qualities of the "subtle fluid." In nearly every city, town and village, some sort of an electric plant is used for traction or lighting purposes, and in view of the resuscitation of a number of victims who were apparently dead, a careful inquiry into the subject should be made.

Victims of lightning-stroke come under the same heading, and make us hope that a large number who are apparently dead from this cause, may be restored to life by such well-known means as artificial respiration, and rhythmic traction of the tongue, after the method of Labord.

M. d' Arsonval has laid great stress upon the hopes of success if such measures are persisted in, even after life has apparently gone forever, and it seems that his teachings have made such an impression, that men outside the profession have become so thoroughly familiarized with them, that the employees of large electrical concerns in the United States are as fully capable of exercising them as a skilled physician. Indeed, it is only the other day that, owing to the continuous efforts of his fellow-workmen, a member of an American electric light company was resuscitated after one hour's unconsciousness.

Some concerns, notably the Electrical Company of Rochester, N. Y., have their employees thoroughly drilled in all these life-saving methods, with most gratifying results.

If only an occasional life is saved by following M. d' Arsonval's precepts, the result will be a decided gain to humanity, and if success is achieved in a few cases, modifications of the procedures, or greater precision in carrying them into effect, will, we hope, be followed by gratifying results.

An ominous question, but one which must be faced, in view of these restorations to life in those supposed to be dead, is, whether electricity or the surgeon's knife is the real cause of death, when the sentence of the law is carried into effect, as in New York, that is whether a condition of suspended animation is converted into an execution by a member of our profession. The thought is a revolting one, and the question should be most thoroughly investigated. As the *New York Medical Journal*, which has always opposed electrocution, says: "If the death-penalty must be inflicted, by all means let it be done by the executioner in the course of his duty, and not left to the pathologist."

VARICOSE VEINS AND ULCERS.

Many a practitioner would, we believe, more properly fulfil his duty to his patients suffering from varicose veins if, instead of advising palliative treatment, he insisted upon radical measures. By palliative treatment we mean whatever may be done to remove the causes and effects of the obstruction without resorting to operative procedure. Among other means may be mentioned general hygienic regimem, attention to the general state of the circulation, to the bowels and liver, as well as rest and elevation of the limb, these two last, by the way, being usually impossible to the class of people who suffer most from this disease. Then adventitious aid to support the weakened limb, such as bandages and elastic stockings, which are so freely used, may enable the patient to "get along" but never can cure.

We need do no more here than mention some of the many procedures instituted for the radical cure of varix; as, ligation; excision, subcutaneous or open; the injection of an irritant, such as pure carbolic acid, into the tissues surrounding the vein; acupressure pins, twisted sutures, etc.

These, no doubt, are all excellent in their proper place, but if we consider to what is mainly due the distension of the veins of the lower limb, it will be seen that radical measures high up, and away from the apparent seat of disease, or at least away from its seat of greatest distress to the patient, should, on theoretical grounds at least, prove more beneficial.

Everyone knows that it is the internal saphenous which is most frequently affected.

The vein gradually dilates, thickens, and becomes tortuous. The inner coat of the vein is altered and *the valves are shortened* and thus rendered inefficient to support the column of blood. Other changes take place, but the important fact to remember is the inefficiency of the valves of the

saphenous. Theoretically, then, the saphenous is the vein to operate upon, and recent researches by Trendelenburg on these lines have shown plainly the fact that the trouble lies, not in the difficulty which the blood experiences in circulating in the veins, but in the pressure of the column of blood heaped up above—that is, in the saphenous vein, a column whose weight rests on the peripheral veins on account of the weak valves of the saphenous. His method—ligature of the saphenous at the upper part of the thigh—is based on this theory.

Perthes, operating on forty-one cases, had thirty-two definitive cures. He had some relapses, due to the vein becoming permeable again some time after the operation; consequently, the author recommends resection of a few centimetres of the vessel. The successes of this method are remarkable—not only for the effect they have on the disappearance of pain, but also for the improved local conditions. Varicose ulcers were notably ameliorated in a short time by ligature of the saphenous. This method appears worthy of adoption; its advantage over Madelung's method—extirpation of the varices—consists in the much greater facility with which it may be performed, as also the more radical and natural means of overcoming the disability.

"THE MONTREAL MEDICAL JOURNAL."

In August we were enjoying the cooling and balsam-laden breezes of the Georgian Bay, and did not see our own journal from start to finish. Hence, though our congratulations to our esteemed contemporary are late, we hope they may be none the less welcome. Beginning with the July number, a new series, with a new and quiet dress at advanced rates, will be given to its subscribers. The chief new features as to the literature of the journal will be: Articles detailing the result of original work; the report of a clinic as actually delivered; signed reviews and criticisms; a monthly retrospect of Canadian medical literature; editorial comments on subjects of interest to the profession; full reports of the Montreal Medico-Chirurgical Society; keeping the alumni of McGill University informed of the doings and successes of their contemporaries.

We are glad to see that the management have seen fit to place such a journal within reach of the Canadian profession. We have already too many advertising sheets with us. No one wishes to run a medical journal for his health, but there is a decent limit to the advertising sheet business. We wish our Montreal contemporary all scientific and financial success in the new order of things.

A NEW NASAL TABLET.

To the Editor of the Canada Lancet:

Sir,—I have been for a long time dissatisfied with Seiler's and Dobell's solutions for cleansing purposes in nasal work, finding them too irritating in the great majority of cases, containing a large number of oils and antiseptics out of place in ordinary nasal disease without pus formation. Looking around for some substitute that would consist of a slightly alkaline solution, as nearly of the same specific gravity as the blood serum as possible, thereby preventing too much osmosis and endosmosis in the nasal cavity, I was taken with the fact that a tablet could be made containing the soluble salts of the blood plasma, which when added to two ounces of luke-warm water, would form a solution as nearly comparable with blood plasma as possible. Parke, Davis & Co., complied with my desires, making an excellent tablet containing the soluble potassium and odium salts of the blood, with the addition of $\frac{1}{16}$th of a grain of menthol to each. I have found it of great service as a cleansing agent, and have received a large number of letters from medical men who have tried the solution and found it answer the purpose in a very satisfactory manner. Parke, Davis & Co., will supply any desiring them. The tablets are called "Plasma Alkaline," and are added to two ounces of lukewarm water, and used as a spray for cleansing purposes, in the nose and throat, wherever a mild and non-irritating solution is desired. Those who make use of them and avoid astringents in the nasal cavity will find a gratifying result both for themselves and patients.

Murray McFarlane, M.D.,
Laryngologist to St. Michael's Hospital, Toronto.

The Treatment of Acute Chorea of Childhood.—In a recent lecture on this subject, *Phil. Poly.*, Dr. Charles W. Burr said: The important element in the treatment of chorea, far more important than medication, is physical and mental rest. Keep the child confined to bed in every case, or, if the attack is very slight, let him remain there for some hours at least every day. If such treatment is instituted at the beginning, recovery will be hastened. If the muscular spasm is not too violent, little children may be permitted to have their picture-books and toys to play with, but all mental and emotional excitement must be avoided. If the case is severe use a large crib, the sides of which have been well padded, or have the bed made upon the floor. The period of confinement to bed varies with the severity of the attack, three weeks being the time usually necessary. Make haste slowly in letting the child return to his usual mode of life He should not be permitted to return to school or to take violent exercise until recovery is complete.

The diet should consist of milk, strong soups and eggs. See that enough is given. "Low dieting" must not be permitted. Dispensary patients, and indeed many people presumably belonging to a much more intelligent class, have very remarkable ideas about diet. Their children are taught the tea and coffee, and sometimes even the alcohol, habits at a very early age, and when ill are stuffed with sweetmeats and pastry. Forbid all these.

Warm, but not hot, baths given daily are of much benefit. A good plan is to put the child in a quite hot bath and add cold water till it becomes lukewarm. Here again you will often meet the obstinate opposition of ignorance, but remember illness is no excuse for dirtiness, and is never so severe as to make cleanliness dangerous. Cold baths, the pack and the shower, are distinctly harmful. Gentle masage will often quiet the movements markedly and obviate not a few of the evils of confinement to bed.

Finally the medical treatment. In rare cases there is serious sleeplessness. Chloral by the rectum, in doses of from 5 to 15 grains, or 10 to 15 grains of trional given by the mouth one or two hours before sleeping time, will act well. Potassium bromide in also useful. Avoid the use of morphine. Ordinarily hypnotics are not needed at all.

No known drug has a specific action in chorea, that is, no drug acts in chorea as mercury does in syphilis or quinine in intermittent fever. It is doubtful if there is any one specific cause of the disease, notwithstanding the discovery of the presence of micro-organisms in a few cases. Things as unlike as mental shock (fright) and the poison of rheumatism are equally powerful causes. Of all drugs supposed to exert a curative influence arsenic is by far the most valuable, but as usually administered, 3 to 5 drops of Fowler's solution three times daily, it is useless. The proper method is to begin with, say, 5 drops after meals in some alkaline water, and to rapidly increase the dose to 20 to 25 drops. While giving it watch for œdema of the eyelids, nausea and diarrhœa. If these symptoms appear, stop for two days and then begin again with the smallest dose. Be on guard, too, against arsenical neuritis. Remember arsenic is better borne by children than by adults. Arsenic is of use especially in those cases in which nutrition is poor and there is either an apparent or real anæmia. I say apparent or real, because most often there is little anæmia, but only skin pallor; or, as frequently happens, anæmia develops late, at a time when the movements have greatly decreased. The condition of the blood can only be determined by examination. Not infrequently you will find choreic children markedly pale, and even with a so-called hæmic murmur, examination of whose blood will give a corpuscle count and hæmoglobin percentage only a little below the average. For the late anæmia give tincture of ferric chloride in doses of, say, 15 drops after meals. I shall only speak about the removal of alleged reflex causes of the acute chorea of childhood, because such causes are largely mythic. If the child needs glasses, put them on, or if he needs circumcision, circumcise him, or if he has worms, get rid of them, but do not expect miracles, do not expect such procedures alone and without other and proper treatment to cure.

Irrigations in Acute Gonorrhœa.—Dr. W. A. Davison, in a recent lecture on this subject, *N. Y. Med. Record*, says: "When gonorrhœa is in the acute stage I would advise not to interfere. Tell the patient to wear a suspensory bandage, to take an alkaline bath every three days, and in about ten days afterward to come back, and then you will cure him." This might do in great medi-

cal centres in France, and possibly even in the medical metropolis of the United States, but the medical man in this section who prescribed such a course in the treatment of his cases of acute gonorrhœa would most assuredly treat very few cases of this disease. My plan is to treat gonorrhœa at any stage. Why not? If we will adapt our remedies to the stage, physical condition and individual peculiarity of patient, I fail to see why we should leave nature to struggle single-handed with her adversary until she had well-nigh conquered. We do not hold our hands in the acute stage of inflammatory affections of other organs, and why this? I think the hot-water irrigations equally adapted to the acute stage. I begin them the very first day the case presents itself, and know of no treatment better than the action of hot water. I use a good-sized fountain syringe well filled with hot borated water—well filled, for thus the heat is retained during the entire time necessary to make a proper application. To the pipe attach a glass tube, and over the end of this for two inches draw a soft rubber catheter; anoint well with carbolized vaseline or oleate of cocaine, if the parts are very much irritated, or better only sensitive; and here one may easily over-estimate the amount of hyperæsthesia, for one may often pass this catheter, causing very little pain. Introduce the catheter carefully one inch, turn on the hot borated solution, and after you are satisfied all all is clean as far as you have gone, very gently and gradually push your catheter into the deeper urethra, and even into the bladder, if one's judgment deems it advisable, allowing, all this time, the water to flow out all around your catheter. The object is to thoroughly cleanse the urethra as you enter. Your fountain should not be elevated more than two feet above the patient. These irrigations should be repeated at least daily, and at least a quart of the hot solution consumed; often two quarts is better. Follow these irrigations after two hours' time with some soothing mucilaginous sedative injection of not more than half a drachm thrown gently in, and repeat each six hours in the acute stage; but in the subacute or chronic I like the morphia and zinc better than anything I have yet tried.

℞—Morphia sulph., ... ℥ iv.
Zinc acetate, ... gr. j.
Aqua, ... ℥ iv. ad. vj.

I have pursued this plan of treatment for several years, and with commendable success. The patient will pass out of his physician's hands with a grateful heart and free from stricture.

Some Medico-Legal Points in Regard to Malpractice.—The following points with regard to a physician's liability in suits for malpractice are given by R. C. B., in the *General Practitioner*.

1. A physician is guilty of criminal malpractice when serious injury results on account of his gross ignorance or gross neglect.

2. A physician is guilty of criminal malpractice when he administers drugs, or employs any surgical procedure, in the attempt to commit any crime forbidden by statute.

3. A physician is guilty of criminal malpractice when he wilfully or intentionally employs any medical or surgical procedure calculated to endanger the life or health of his patient, or when he wilfully or intentionally neglects to adopt such medical or surgical means, as may be neoessary to insure the safety of his patient.

4. A physician is civilly responsible for any injury that may result to a patient under his care, directly traceable to his ignorance or his negligence.

5. A physician is expected by the law to exhibit in the treatment of all his cases an average amount of skill and care for the locality in which he resides and practices, further than this he is not responsible for results, in the absence of an express contract to cure.

6. A physician is not relieved of his responsibility to render skilful and proper treatment or reasonable care and attention, by the fact that his services are gratuitous.

7. A physician is not obliged to undertake the treatment of any case against his will, but having once taken charge, he cannot withdraw without sufficient notice to allow his patient to procure other medical assistance.

8. A physician having brought suit and obtained judgment for services rendered, no action for malpractice can be thereafter brought against him on account of said services.

9. A physician is relieved of all responsibility for bad results in connection with the treatment of a case, when there can be proven contributory negligence on the part of the patient.

10. A physician is civilly responsible for any injury to his patient resulting from the ignorance or carelessness of his acknowledged assistants, but he is in no way responsible for their wilful criminal acts.

Some "Don'ts" for Myopes.—Dr. G. Sterling Ryerson, Professor of Ophthalmology in Trinity Medical College, Toronto, says: Myopia being essentially a condition due to abuse of the eye, one is constantly obliged to say "don't" to patients. It occurs to me that it might be useful to put these prohibitory rules in aphoristic form:

1. Don't read in railway trains or in vehicles in motion.
2. Don't read lying down or in a constrained position.
3. Don't read by firelight, moonlight, or twilight.
4. Don't read by a flickering gaslight or candlelight.
5. Don't read books printed on thin paper.
6. Don't read books which have no space between the lines.
7. Don't read for more than fifty minutes without stopping, whether the eyes are tired or not.
8. Don't hold the reading close to the eyes.
9. Don't study at night, but in the morning when you are fresh.
10. Don't select your own glasses at the outset.

It would almost seem as though some of these rules were too obvious to require mention, but practical experience shows that myopes abuse their eyes just in the ways stated. Reading by firelight or by moonlight are favorite sins. Reading lying down tends to increase the strain on the accommodation, and while travelling tires the ciliary muscle because of the too frequent adjustment of focus. In short anything which tends to increase the quantity of blood in the organ favors the increase of the defect, leading in extreme cases to detachment of the retina and blindness.

The Best Treatment in Heart Disease.—Robert H. Babcock, of Chicago, Ill. (*Jour. Amer. Med. Assoc.*) concludes an able paper on the above subject as follows:

1. The position taken by Fraentzel, that rest is injurious in the treatment of all forms of heart disease is untenable, and the reasons he assigns are incorrect. Prolonged rest is detrimental, undoubtedly, in cases of enlargement of the heart, without valvular disease, partly if secondary to arterio-sclerosis, and in cases of fatty or other degeneration of the cardiac muscles.

2. The cause, however, lies in the circulation outside of the heart and not, as stated by Fraentzel, in the liability of cardiac, like striped voluntary muscle, to degenerate as a result of prolonged inaction, since the heart muscle, cannot during life be subjected to complete repose.

3. When compensation has become destroyed in valvular lesions of the heart, particularly mitral stenosis and aortic incompetence, rest is indicated theoretically and is beneficial in practice.

4. Brachycardia would theoretically contra-indicate prolonged rest.

5. On the other hand, it is called for in paroxysmal tachycardia, but should not be maintained, after having shown its powerlessness to affect the heart rate.

6. Acute inflammatory or degenerative affections of the heart indicate rigid rest in the recumbent position.

Acute Mania.—Extract from a paper read before the Academy of Medicine of Cincinnati, May 13th, by W. H. DeWitt, M.D., *Lancet-Clinic.*

The medical treatment of these cases is very simple, and can be disposed of in few words. To procure sleep and quiet is perhaps the greatest desideratum, and I know of nothing so certain in its action as chloral hydrate, in doses of 40-60 grains. It may be given alone or combined with one of the bromides. The "Bromidia" of Battle & Co. I have always found very reliable. It is almost certain to quiet and produce sleep. You will occasionally meet with cases that resist the influence of chloral even in large repeated doses; here opium or some one of its derivatives, either given alone or in connection with the chloral, will be found of service. If hypodermically administered, not less than $\frac{1}{3}$ gr. should be given. Small doses only excite the patient, and do more harm than good. Hydrobromate of hyoscine has some advocates. The milder hypnotics, such as sulfonal, chloralamid, etc., are not to be thought of in these cases; they are practically inert, and do no good.

The Rocking Chair.—Appearances would seem

to indicate, *Medical Press and Circular*, that that oldtime and familiar piece of furniture, the "rocking-chair," has passed out of fashion. Time was when it always formed a part of the stock-in-trade, so to speak, of the nursery, and we may assume that many a child in former days has been soothed to sleep by means of its gentle movements. If a French medical man, however, is to be believed, the "rocking-chair" has a new future before it. Instead of being relegated to the nursery it has now the opportunity of being promoted to the drawing-room. A new use for the "rocking-chair" has been discovered. We learn that its use is most beneficial in the case of patients who suffer from atony of the stomach, and in whom digestion is sluggish. It is said that its gentle and regular oscillations have a wonderful effect in stimulating the gastro-intestinal peristalsis. There is one point, however, to be remembered. Everything seems to depend upon the chair. Great stress is laid upon the fact that it should be very mobile, in order that its movement by the patient may involve the least possible effort; it should also rest upon its axis, in such a position that the sufferer may be almost horizontal. If these details be attended to, it is to be expected that the "rocking-chair" will do what is required of it.

Acetanilid Heals Chancroids in from One to Seven Days.—Dr. Thomas S. K. Morton is reported as saying in the *Philadelphia Polyclinic*, that upon "chancroids, the effect of acetanilid is most surprising." He states that all soft venereal sores (chancroids) and inflammations "have uniformly healed in from one to seven days, with a single exception," which one was of a phagedenic nature, and required cauterization with nitric acid before it would heal under the acetanilid. He prescribes a drachm of powdered acetanilid. The patient is to wash several times daily, and then rub in the dry powder. If the sore is beneath the prepuce, leave a quantity of the drug inside, which prevents excoriations by urethral discharges. The drug is entirely wanting in odor.

Piperazin in Uric Acid Diathesis.—*Nojinkoff. Med. Rec.* 1. Piperazin in small doses increases the urine; urine becomes clear and lowered specific gravity. 2. Diminishes acidity of the urine. 3. Lessens quantity of urea and the percentage of uric acid. 4. Piperazin, in small doses, given for a long time, does not produce albuminuria if kidneys are healthy; if they are diseased, piperazin given in small doses appears to increase albuminuria, and likewise hæmaturia. This ceases upon stopping the piperazin. 5. Digestive troubles not aggravated by small doses. 6. Raises blood pressure. 7. No influence on composition of blood. 8. In three gramme dose daily can be well supported by sick; rarely need for larger doses.

Gonorrhœa.—A favorite prescription of Dr. J. William White's, for the second stage, is, *Med. World:*

℞.—Hydrarg. chlor. corros., . . gr. $\frac{1}{6}$.
Acidi carbolici, ... ℥ iss.
Zinci sulpho carbolate, . . . gr. xxiv.
Boro-glyceride (50 per cent. sol.) f. ℥ ij.
Aquæ rosæ, . . . q. s. ad. f. ℥ viij.
M. Sig.—Use as an injection after urinating.

Pruritis Cutaneus often yields to:
Hydratis chloralici
Acidi carbolici, āā . . . grs. x.
Ol. olivæ, ... ℥ ii.
M. D. S.—External use. Apply as often as needed.
Sig.—External use only.

Application of Leeches.—The application of leeches to the temple is often of great service in relieving pain and subduing inflammation in the eyes and their appendages, *Univ. Med. Jour.* The leech is best applied by putting it in a large test tube partly filled with water. When this is tilted so that its open end and the mouth of the animal come in contact with the skin of the temple, the leech feels so much at home in his native element that he promptly bites the skin when he touches it, and sucks himself full of blood.

Recovery from a Large Dose of Cocaine.—A man had swallowed eight or nine grains of cocaine, *Med. Rev.* His symptoms were constriction of the throat and region of the heart, great difficulty in swallowing and mental dulness. The pupil light-reflex was absent and the pupils were dilated. His appearance was that of one partly under the influence of alcohol, but the movements resembled those of a bad case of chorea; they were slower, however, and more regular. The body was

alternately rotated from side to side and bent at the same time, while the arms and legs were not still for a moment. The patient appeared to be constantly masticating, but could not swallow. There was some lividity of the lips. Amyl nitrite was administered with immediate benefit. All of the symptoms disappeared in about five or six hours.

Anæmic Patients who have Malarial Cachexia.—Dr. T. D. Crothers, editor of *The Quarterly Journal of Inebriety*, published under the auspices of The American Association for the Study and Cure of Inebriates, and who is an authority on neurosis, writes in his last number as follows:—Antikamnia and Quinine are put up in tablet form, each tablet containing two and one-half grains of antikamnia and two and one-half grains of quinine, and is the most satisfactory mode of exhibition. This combination is especially valuable in headache (hemicrania), and the neuralgias occurring in anæmic patients who have malarial cachexia, and in a large number of affections more or less dependent upon this cachectic condition.

For Blepharitis.—Millendorf recommends (*Col. and Clin. Rec.*):

℞—Red oxide of mercury . . . grs. x.
Vaseline . . . . . ℥ss.
M. Sig.: Apply to the edge of lid at bed-time.
Or,
℞—Ammoniated mercury . . . grs. xx.
Powdered camphor . . . . grs. x.
Vaseline . . . . . fl. ℥ss.
M. Sig. Apply at night.
Or,
℞—Solution subacetate of lead . gtts. x.
Ointment of rose water . . ℥iij.
M. Sig.: To be used for more chronic forms of marginal blepharitis.

Vaseline in Erysipelas.—H. Koester, of the Sahlgren Hospital, has made a study of the relative value of the various common methods of treatment of erysipelas, *Univ. Med. Jour.* The duration of the fever appeared to be the same when vaseline was used as when Goulard's water, iodine applications, ichthyol and vaseline and sublimated lanolin were employed. None of these remedies were capable of checking the process with certainty, and in exceptional cases this spread over almost the whole surface of the body. The complications, especially the phlegmonous process, did not appear to be greater after the use of vaseline than when the other measures were used. Consequently the author regards vaseline as quite as efficacious as the other well-known topical remedies, and preferable because inoffensive, cheap, without disagreeable odor, and producing no irritation.

A Series of Thirty Cases of Movable Kidney Treated by Operation.—W. Bruce Clarke, *Brit. Med. Jour.*—Cases of movable kidney are divided into the acute and chronic forms. The acute form presents prominent symptoms, while the chronic form is usually unattended by urgent symptoms. The results obtained in operation on movable kidneys depend on the condition of the organ when the operation is performed. Little is gained by leaving a much diseased kidney if the other organ is known to be healthy. The more unhealthy the movable kidney proves to be, the more certain is it that the osposite organ is capable of taking on the work of both sides. If the ureter is lax and elongated, the tendency to form kinks and temporary valves is considerable, and may prevent the successful termination of a nephrorrhaphy.

Notes.—*Med. Rec.*—*Stricture of the Urethra* is most safely healed by gradual dilatation repeated every third day. In continuous dilatation a filiform bougie can remain three days, after which other instruments can be used.—*Horwitz.*

Varicose Ulcers.—Cleanse with sodium bicarbonate, apply methyl-violet solution, cover with absorbent cotton, and give even support to the tissues by bandage.—*Summers.*

Bed-sores.—Early application of strong nitrate of silver solution.

Sterilizing the Hypodermic is apt to spoil the leather packing.

Carbolic Acid should be applied very sparingly to open wounds, especially in young and old subjects.

Ichthyol to Abort Furuncles.—According to Dr. Cantrell, a fifty per cent. ointment of ichthyol applied thoroughly over the irritated part will usually abort a furuncle in about twenty-four hours.

Age and the Malignancy of Tumors.—Every tumor first noticed in the breast after the thirty-eight years epoch is, according to Dr. Herbert Snow, *Med. Rev.*, in the great majority of cases, primarily malignant; in the remainder, it is certain, sooner or later, to become associated with malignant features in one form or another. From this sweeping rule, the most simple cyst within the gland-parenchyma, or dilated duct, is not exempt.

Ptomaine in the Urine of Cancerous Patients.—Griffith, *Br. Med. Jour.*, before the Parisian Academy of Medicine, described a ptomaine extracted from the urine of a cancerous patient—a white substance, which crystallizes in needles, and dissolves in water with an alkaline reaction; it gives a brown reaction to Wessler's reagent; moreover, it is highly poisonous, and injected into the veins leads to fever and death in about three hours. It is not present in normal urine.

Neurasthenia.—The following was a favorite prescription of Sir Andrew Clark for various kinds of neurasthenic debility :—*Pract.*

℞—Acid phosphate . . . . . ʒj.
Ext. cocæ liquid . . . . . ʒss.
Ext. damian. liquid . . . . ʒss.
Tr. nucis vomic . . . . . ♏x.
Syrup. zingib . . . . . ʒj.
Aquæ, ad. . . . . ʒss.

Ft. dosis.

Sig.: To be taken in water at 11 a.m. and 6 p.m.

How Death Comes.—According to the census returns of 1890, *Gaillard's Med. Jour.*, of every 10,000 deaths in the United States 1 will be from calculus, 35 due to Bright's disease, 40 to fevers other than typhoid, 59 to rheumatism, 70 to scrofula, 130 to cancer, 140 to apoplexy, 148 to whooping cough, 160 to dysentery, 190 to meningitis, 220 to scarlatina, 246 to ague, 250 to convulsions, 310 to typhoid fever, 350 to heart trouble, 480 to diphtheria, 880 to diarrhœa, and 1,420 to phthisis. Of this number 2,210 are from typhoid, diphtheria and phthisis, all of which are preventable, and if we take in whooping cough, dysentery, scarlet fever and diarrhœa, we shall have more than one-third of all deaths at the present time from preventable causes.

Alcohol at Twopence-halfpenny a Quart.—M. Moissan, the French Chemist, *Med. Press and Circular*, who succeeded in transforming carbon into diamonds, has discovered a method of making alcohol by synthesis, by which means he believes that he will be able to produce the spirit at about 2½d. per quart. The process consists in subjecting a mixture of coke and quicklime to the great heat of an electric furnace, by which a carbid of calcium is produced. This preparation, when thrown into water, decomposes it, and acetylene is evolved, which is taken up by ammoniochromous sulphate, and is subsequently transformed into ethylene by heat. The ethylene is converted into sulphovinic acid by passing it through hot suphuric acid, and this becomes alcohol by treatment with hot water.

Sub Acute Gastric Catarrh.—*Grainger Stewart.*

℞—Pulv. rhei. . . . . gr. i-iv.
Bismuth subnit. . . . . gr. viii-xii.
Potass. bicarb. vel sod. bicarb. gr. vi-xii.
Pulv. cinnamomi co. . . . . gr. ii.

M.—Fiat pulv.

Sig.—One powder to be taken morning and evening.

For Pulmonary Tuberculosis. — Take, *Med. Chron.*

Calcium phosphate . } each 4 grains.
Menthol . . . . }
Sodium bicarbonate . 3 "
Powder of nux vomica } each ¾ grain.—M.
Iron lactate . . . }

To be taken four times a day with food.

Ichthyol.—This agent is recommended as a gargle in acute pharyngitis. (*St. Louis Clin.*) In the treatment of acute coryza, good and speedy results may be obtained by spraying the nose with a mixture of one part of ichthyol and one hundred parts each of ether and alcohol. One application is said to be all that is necessary,

We would call the attention of our readers to to the advertisement, in another place, of the firm of G. W. Flavell & Bro., Philadelphia, Pa., dealers in Abdominal Supports, Suspensory Bandages, etc. We are satisfied that a careful perusal of not only this, but of all our advertisements, will repay our patrons.

Rheumatism.—*Hare:*

R. Veratrini,
Hydrarg. iodidi virid . . . āā ʒ j.
Petrolati . . . . . ℥ j.
M. Sig.: Apply over joints affected.

As we go to press the news has reached us of the death of the eminent scientist, M. Pasteur, at the age of 73 years. We hope to make reference to his life in our next issue.

The chair of Pathology in the Faculty of the Jefferson Medical College in Philadelphia is vacant.

Books and Pamphlets.

Medical Gynæcology—A Treatise on the Diseases of Women from the Standpoint of the Physician. By Alexander J. C. Skene, M.D. New York: D. Appleton & Co. 1895.

It seems eminently proper that one who, like Dr. Skene, has an assured position as a judicious, but bold and successful operator, should have undertaken the production of a work on Medical Gynæcology, for which there has been of late a decided necessity.

A specialty, raised within a few years from not much more than a routine of palliative topical applications to the very first position in the department of surgery, has naturally attracted a very large following. The triumphs of the knife, the scissors and the ligature have given excuse for the warrantless, but spreading belief, that gynæcology belongs to surgery, and has no strictly medical side.

The book under review contains excellent evidence that the very highest rank will yet be taken and held by the physician who will discover the real nature of women's diseases and cure them without operation. It is the first really serious attempt in these latter days, to look at gynæcology from a physician's standpoint and in a systematic manner.

Part I. treats of the essential differences of sex, heredity, environment, and the care necessary to have a healthy passage from girlhood to womanhood.

Part II. goes on to the period of active female life, and deals with the diseases common to that period.

Part III. traces the medical history of woman in her functional and special decadence, while it conveys incidentally a great deal of well-digested information. The chief value of Dr. Skene's book seems, to the reviewer, to lie in the manner in which it opens up lines of thought, and suggests possibilities of helpfulness without operative procedure.

Those books are most valuable which do the most to set men thinking, and assuredly this one before us is of that stamp. It is creditable alike to its scholarly author, its publishers and to American medicine.

A Manual of Bandaging; Adapted for Self-Instruction. By C. Henri Leonard, A. M., M.D., Professor of the Medical and Surgical Diseases of Women, and Clinical Gynæcology in the Detroit College of Medicine. Sixth edition, with 130 engravings. Cloth, octavo, 189 pages. Price, $1.50. Detroit, Mich.: The Illustrated Medical Journal Co., Publishers. Toronto: Carveth & Co.

The main feature for commendation of this book over other similar works is that each illustration shows the direction of the various turns of the bandage with arrow-heads, and each turn is properly numbered; this renders the book a self-instructor to the reader of it, who has but to put the various bandages about the limbs of an office companion a few times, when the "trick" of its application upon a patient has been learned. It takes the place, in this way, of hospital drill. Besides the "Roller Bandages," the various T's "Cravats," "Slings," "Tailed," "Adhesive" and "Plaster" bandages, and "Immovable Dressings" are given. The book is divided into sections, treating of "The Bandag s of the Head," of "The Body," of "The Upper Extremity," of "The Lower Extremity," "Knots," "Strappings," "Compresses" and "Poultices," with full description of making and applying the same. There is an illustration for nearly every bandage described. It has been recommended as a text book in various medical colleges and hospitals in this country, and has had two editions sold abroad. A medical student could profitably spend his vacation evenings in mastering the application of bandages by using this book as a guide; and to a practitioner it would not come amiss.

THE CANADA LANCET,

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

The LANCET has the Largest Circulation of any Medical Journal in Canada.

Original Communications.

A PISTOL SHOT WOUNDING STOMACH, LARGE AND SMALL INTESTINE, AND MESENTERY, WITH RECOVERY.

BY. GEORGE S. RENNIE, M.D., L.R.C.S.E., L.R.C.P.L., HAMILTON, ONTARIO.

J.N., æt 19.—Family history good; has been addicted to the use of alcohol for three years; physique poor.

The patient was shot in the abdomen, during a bar-room row, with a 32 calibre revolver. Was seen June 25th in consultation with Dr. Balfe at 4.15 p.m., soon after accident. The ball entered the abdomen three-quarters of an inch above, and to the right of, the umbilicus; a portion of omentum about half the size of a man's hand protruded from the puncture. His pulse was weak and frequent, and the patient in a condition of collapse. We dressed the wound with aseptic cotton, and sent the patient to St. Joseph's Hospital in the ambulance. He was under the influence of alcohol at the time of the accident. Operation at 5 p.m.; was assisted by Drs. Balfe, Cockburn, Storms and Rogers. The patient was anæsthetized, his clothing cut off, and his extremities wrapped in batting and bandaged. We carefully scrubbed the belly with soap and water, and 1 in 1000 bichloride solution. The hernia of omentum, which was full of dirt, was ligatured with catgut and cut off. I made an abdominal incision in the median line, about four inches long, starting just below the navel and extending downwards. All bleeding vessels having been tied, the abdominal cavity was opened and the incision extended to the right of the navel to the point of entrance of the ball, cutting through the abdominal wall with scissors. When we got into the abdominal cavity a fæcal odor was quite apparent. The abdominal cavity was completety filled with dark fluid blood, a quantity of which was sponged out. The first hole found was in the mesentery of the transverse colon, the size of a quarter of a dollar, but oval in shape. The large veins and arteries that had been wounded were bleeding profusely. The bleeding from this opening I controlled, by passing a stout silk purse-string suture around the opening by means of an ordinary round, straight sewing needle, which suture was tied tightly. Two smaller holes were next found in the mesentery of the small intestine, which were also allowing free hæmorrhage. These were ligatured, and tied in a like manner, which effectually stopped the bleeding. At this time three or four feet of bowel was outside the peritoneal cavity, but we kept it warm by applying towels wrung out of hot sterilized water. On taking out more of the small intestine, it was found that the ball had entered the gut, and passed through a coil, making another hole at its point of exit, on the opposite side. These wounds were about the size of my little finger, and their mucous membrane was everted. These two openings I repaired by using a fine, round, ordinary sewing needle with fine aseptic silk. The coil was steadily held up, while the peritoneal surfaces of the first opening were brought together with a continuous Lambert suture. I started the suturing fully half an inch from one margin of the wound, and finished fully half an inch from the opposite margin, placing the stitches at intervals of about one-eighth of an inch. When these sutures were drawn taut, it was found that they brought the peritoneal surface into close apposition, and also beautifully controlled the hæmorrhage. Hole number two, or point of exit, was treated in a like manner. On taking out more of the small intestine two more holes were found in the mesentery, which were treated in a similar manner to the other holes in mesentery, that had already been repaired.

After removing more of the small intestine from the abdominal cavity, it was found that another coil of intestine had been perforated by the ball, in the same manner as the intestine that had already been repaired, that is, the ball had travelled through the gut from side to side making two holes in the bowel. These bowel punctures, numbers three and four, which were bleeding considerably, were repaired and the hæmorrhage stopped

in a like manner to holes numbers one and two, by using fine silk with a continuous Lambert suture. We next found two more holes in mesentery, which were brought together with a silk purse-string suture, precisely as the other mesenteric wounds had been treated.

It was now found necessary to enlarge the abdominal incision slightly upwards, and on bringing the transverse colon into view, we found that the ball had pierced it from side to side, making in it two ragged holes that would take my index finger. These bowel wounds, numbers five and six, were repaired in a similar manner to bowel wounds numbers one, two, three and four.

The stomach was next examined, and on its anterior wall near the lower border was a hole about the size of a quarter of a dollar, but elliptical in shape, with ragged edges. This perforation number seven was repaired with the continuous Lambert suture, in the same way as we had done with the other six bowel wounds. On examining the other side of the stomach no hole could be found.

The intestines were replaced within the abdomen, and the cavity thoroughly flushed with hot sterilized water, by pouring it in from a large bedroom pitcher, and forcing it out of the cavity, by external pressure with the hands on each side of the abdomen.

We found some large-sized clots, one of which was half the size of my fist, which we removed. All blood and clots having been removed from the peritoneal cavity, I started at the lower end of the gut and examined it from one end to the other, keeping it warm all the time with hot aseptic towels, but could not find any further damage that the ball had done. The abdominal cavity was next searched from the diaphragm to the pelvis, but without finding any trace of the bullet or other damage done by it.

All the wounds that had been repaired were for the last time inspected, but no hæmorrhage or oozing was found. By this time our patient was very weak and hypodermics of brandy or ether were administered at intervals.

The intestines were replaced, and the abdominal cavity thoroughly washed out with hot sterilized water; fully a dozen large jugsful were used in these repeated flushings. All the water was sponged out and a sponge on a holder left in the lower part of pelvic cavity. A large flat sponge was inserted over the intestines, to keep them in place, while the abdominal stiches, of silkworm gut, were introduced. The upper stitches were tied first, and the sponge was removed from the pelvic cavity, which was not even bloodstained. A drain of iodoform gauze was passed to the lowest part of the abdominal cavity, and the other end brought out through the lower end of the abdominal wound. Having removed the large flat sponge from over the intestines, the remaining silkworm gut sutures were tied. The wound was dusted with iodoform, covered with silk protective, sterilized gauze dressing, and a thick layer of sterilized absorbent cotton applied, the whole being kept in place by a broad many-tailed flannel bandage. The patient was placed in bed with blankets and hot bottles.

During the operation, on account of his weakened condition, he received about twelve hypodermics of brandy or ether. When in bed the pulse could just be felt at the wrist. Hypodermics of brandy, to be alternated with a saline solution (one drachm to the pint), were ordered to be given every ten minutes until pulse improved.

Time of operation—one hour and twenty minutes. Six hours after the operation the pulse was 130, and the temperature 99 2-5°. The patient complained of pain, so a quarter grain of morphia was given hypodermically, and he rested fairly well during the night.

June 29th.—Morning temperature 98⅓; pulse 124. Taking milk and brandy as nourishment; suppositories of opium, one grain each, ordered for pain, and to keep bowels at rest. Evening temperature 99 2-5; pulse 132.

June 30th.—Morning temperature 99; pulse 120. Wound dressed, drain of iodoform gauze removed, and placed in sterilized gauze for examination. It was pulled straight up through the wound, and had remained evidently at the bottom of the pelvic cavity where it had been placed; its lower part was covered with fibrin, and it was not even bloodstained; which clearly proved that not even any oozing of blood had taken place. The wound looked very quiet, no redness or tenderness, and abdomen quite flat. Evening temperature 99 2-5; pulse 120. The drain of gauze, which was carefully kept in sterilized gauze and cotton, I sent to Dr. Edgar, of the Hamilton City

Hospital, who very kindly made cultures from it; but after keeping them at a temperature of 37 degrees centigrade for forty-eight hours, he was unable to find the development of a single colony, thus clearly proving that the abdominal cavity was surely aseptic, for if germs were to be found they would have been present in the fibrin on the gauze drain that I had removed.

July 1st.—Morning temperature 99 2-5; pulse 72. Patient much improved, and rested quietly nearly all night. Had a small motion of the bowels. Takes his nourishment of milk regularly. The dressing that had become loose was replaced Evening temperature 99 2-5; pulse 84.

July 2nd.—Temperature 99; pulse 76. Patient rested nearly all day. Evening temperature 99 2-5; pulse 80.

July 3rd.—Pulse 78; temperature 99. Patient takes milk regularly, and shows marked improvement, and does not complain of pain. Had large motion of the bowels. Evening temperature 99; pulse 76.

July 4th.—Pulse 72; temperature 98 2-5. Patient much improved. Had motion of the bowels. Taking milk and egg-nog regularly. Wound dressed. Some stitches that were found to be cutting were removed. Slight amount of redness around each stitch, but wound otherwise quiet, and dry, and abdomen flat. Evening temperature 99 2-5; pulse 76.

July 5th.—Pulse 70; temperature 98 2-5. Patient rested quietly, and takes nourishment regularly. Evening temperature 100; pulse 76.

July 6th.—Temperature 99; pulse 76. No unfavorable symptoms. Evening temperature 100; pulse 78.

July 7th.—Temperature 98 2-5; pulse 76. Evening temperature 99 2-5; pulse 72.

July 8th.—Temperature 98 2-5; pulse 72. Evening temperature 99; pulse 72.

July 9th.—Temperature 98 2-5; pulse 72. Dressed wound. Looks very healthy and healing kindly. Removed all stitches. Several of the stitches that were removed had cut quite deeply into the tissues, and strapping was used to take the tension off the wound. Evening temperature 99; pulse 78.

From this day on the patient took solid food, and steadily improved, his temperature and pulse remaining normal, until July the 15th, when a visitor gave him a dish of raspberries to eat, which caused an acute attack of indigestion with severe abdominal pain and vomiting. Morphia had to be given hypodermically, to relieve these symptoms, and the next day he was much improved, and able to sit up and be around his room as usual. He was discharged from the hospital in one month, and during his last two weeks' stay he gained in flesh, and felt nearly as well as ever. Since that time he has not suffered any, and is as strong as he ever was in his life.

This case is a singular one, from the fact that one small pistol ball should, in passing through the abdominal cavity, have done such an extensive amount of injury to the abdominal viscera. The ball, I believe, passed from right to left in a downward and backward direction, perforating first the stomach, then the mesentery of the transverse colon, the transverse colon, mesentery and two coils of small intestine, and is at the present time encysted in the muscles of the back close to the spine, and is not doing any harm. At the time of the operation a further search might have been made for the ball, but the condition of the patient would not permit of it, and we had to be content when we had stopped all hæmorrhage, repaired all wounds in the bowel, and got the abdominal cavity as aseptic as possible.

Another feature in the case is, that although the ball had caused such severe injuries to the intestines, allowing the fæcal matter to pass into the abdominal cavity, and also allowing of profuse hæmorrhage from bowel and mesentery, that the patient's temperature scarcely went above normal, only on one occasion reaching one hundred; and that after the operation the patient did not show practically one unfavorable symptom. This clearly shows how effectual the continuous Lambert suture is, when properly applied, in controlling the hæmorrhage, shutting off the alimentary canal from the abdominal cavity, and beautifully bringing the peritoneal surfaces in close apposition, for the healing process to take place. It holds them in that position until nature has formed a firm and lasting cicatrix. This suture can be very rapidly inserted, and I wonder why any one should use any other form of complicated suture which takes more time; or use any device which takes fully as long or longer to insert, and from which after-complications may arise.

This case also beautifully illustrated how the abdominal cavity, although full of clots, fluid blood, and fæces, can, by repeated flushings and washings, be rendered truly aseptic; as has been proved by the examination of the drain that was removed, and from which not a single colony had developed even at the end of a week, and also from the history of the case, and the after result of the operation.

LABORATORY NOTES ON THE BACTERIOLOGY OF DIPHTHERIA.*

BY E. B. SHUTTLEWORTH, PHAR.D., F.C.S.

Bacteriologist to the Board of Health, Toronto, and Professor of Bacteriology, Trinity Medical College.

A considerable amount of bacteriological work relating to antitoxin experiments was performed in the laboratory of the Toronto Board of Health, during the closing months of 1894, but it was not until February 1st last, that the examination of diphtheria exudates was carried on in a regular and systematic manner. The importance of such investigations was clearly demonstrated by the results obtained in the Hospital for Infectious Diseases in Berlin and Paris, and the extensive researches of the Health Department of New York. It was, therefore, determined by Dr. Sheard, Health Officer of Toronto, that similiar work should be undertaken in connection with the Isolation Hospital, an institution entirely under city control, and in which the greater number of patients are the victims of diphtheria.

The objects sought were: 1. To confirm clinical diagnosis, and determine doubtful cases. 2. To distinguish between cases of true diphtheria, and those caused by cocci, so that patients affected by the latter could be isolated, and more speedily discharged. 3. To demonstrate the absence of the specific bacillus from the respiratory passages of convalescents from true diphtheria, with a view so shortening the usual twenty-eight days detention in hospital. 4. To assist in the diagnosis of outside cases, thus saving isolation, and disinfection, with their attendant inconvenience and expense. 5. To afford a means of contributing towards a knowledge of the disease.

*Read at the Belleville Meeting of Ontario Health Officers, and re-printed from the *London Lancet*.

†*Medical Record*, Vol. 46, Nos. 11 and 13.

The purpose of this paper is that of presenting a brief account of the work performed, and summarizing such facts as seem likely to be interesting or useful. To this end the same general plan has been followed as that adopted in the joint report of Drs. Park and Beebe,† of the Bacteriological Laboratory of the New York Health Department, and presented to Dr. Hermann M. Biggs, Chief Pathologist. Results may in this way be more advantageously compared than with those of Berlin and Paris, where a type of disease of greater severity seems to prevail than either in New York or Toronto.

From Feb. 1st to July 1st, there were admitted to the Isolation Hospital 188 patients said to be suffering from diphtheria. The records also embrace, for the same time, 60 private cases in which the exudates were submitted by city physicians. The details of these 248 cases are complete, as far as the examinations are concerned, and are included in the statements made as to organisms present, but, as these outside cases could not be readily traced, no further particulars were sought.

With regard to the hospital cases it may be assumed that the clinical diagnosis was sufficiently conclusive to warrant the admission of the patients, and it may also be noticed that, as most of them belonged to the poorer classes, they cannot be considered as being amongst the most hopeful. In other words, the hospital clientage may be taken as consisting of apparently pronounced cases, with an unfavorable history, and any statistics gathered from such records will certainly not lead to an underestimate of the diseases commonly classed as diphtheria.

Collection of the Exudate.—The infected material is taken by the attending physician, by passing a swab firmly over any patches of visible exudate on the tonsils, or pharynx, and at once sent for examination to the laboratory of the Health Department. This method is deemed preferable to that commonly practised, in which a culture is at once made by the physician, as it affords an opportunity for the bacteriologist to make an examination of the exudate, as well as the culture, thus forming a check of some value, and also often enabling a reliable diagnosis to be at once pronounced. Another advantage is that the condition of the culture medium can be

guaranteed, and the manipulation be in more experienced hands.

The swabs are prepared by cutting No. 15 steel wire into 6 inch lengths, roughening one end by a few strokes of a chisel-edged hammer, and firmly winding on a little ordinary cotton wool, so as to make an applicator of about a quarter of an inch in diameter. The other end of the wire is then passed through a tapered cork, of best quality, which fits into the non-lipped mouth of a stout, well annealed, test tube, of 15 mm. external diameter, by 100 mm. in depth (say five-eighths of an inch by four inches).

The object should be that of preventing the infected material from soaking into the swab, and preference is, therefore, given to ordinary cotton wool, rather than the absorbent kind hitherto recommended. A cork will also be found an improvement on the usual plug of cotton wool, and is practically a sufficient protection from extraneous germs. The tubes containing the swab are sterilized by one and a half hours' exposure to a dry heat of 150 degrees C. The swabs are supplied free to any physician requiring them.

Culture.—Experiments have been made with various media, but Lœffler's blood serum mixture, prepared by the quick method, has been found to best answer the requirements, though, when recently made, and bearing water of condensation, it does not appear to give such good differential staining as when dry, or older. The white and yolk of an egg, with one-third its bulk of bouillon, containing one per cent. of glucose, may on occasion be used, as also glycerin-agar, which is, however, slower than serum, though yielding much better macroscopic preparations. Park and Beebe claim that glycerin-agar is not so reliable for diagnostic purposes, as is serum, and I have noticed that the growth of Lœffler's bacillus, on this medium, is less luxuriant, while the cocci appear to develop more rapidly and vigorously.

In making a culture the infected swab should be lightly but firmly passed over the surface of the slanted serum, but not with such force as to abrade it. The infected tubes are then kept in an incubator, at 35 to 37 C., for say 12 hours, when the growth will be easily recognized. As a matter of fact the cultures are set one day, and examined next morning.

Cultural characteristics are of value as affording collateral evidence of the presence of the specific organism, and on transparent media the colonies are more or less easily recognized. It is, however, on morphological characters, and peculiarities of staining, that reliance must be placed.

Staining.—A smear from a swab is made directly on a slide, and is dried, fixed, and stained with Lœffler's blue. In making a preparation from a culture, a small drop of water is put on a slide, by means of a platinum loop, and a portion representing the entire growth on the surface of the serum is removed by a platinum needle, and evenly distributed in the water, and is then dried, fixed, and stained. A drop of cedar oil is put on the slide, and the examination made by a $\frac{1}{12}$th oil immersion lens. Staining directly on the slide, as in the recognition of bacillus tuberculosis, is quicker and handier than using a cover glass, and, with proper skill in using the objective, is practically safe.

Characteristics of the Diphtheria Bacillus.—It will be unnecessary to repeat the well known descriptions of this organism, and I would only emphasize its great liability to variation in form and size. This sportive tendency is sure to puzzle the inexperienced observer, though, when understood, it becomes diagnostic. The organisms found in the exudate are often presented as diplobacilli, which stain more or less uniformly, and, at most, show polar darkening, while, in other, and much rarer cases, they are exceedingly characteristic, resembling those grown on serum, and possessing strongly marked interruptions. The cause of this variation may possibly be found in the condition as to reaction, or composition of the mucous membrane or secretion, in the throats of different patients. This seems likely, as under artificial cultivation the character of the medium greatly influences the appearance of the bacillus. I may say that I have found these characteristic specimens most frequently in the exudates from adults.

The variations shown in the bacilli of cultures are not, however, to be wholly accounted for by the character of the medium, nor the temperature, or staining manipulations. Cultures of different exudates, grown together, under conditions precisely similar, and stained in like manner, often show very different results. In some the bacilli

may be uniform in shape, size, arrangement, and diagrammatic staining, while other specimens exhibit wide differences in all respects; presenting extremely long rods, with wide interruptions; or clavate, fusiform, or even pyriform organisms, of the most bizarre description. It is thought that these are involution forms; or, according to Klein, that they represent a relationship to a mycelial fungus. The variations are, however, very interesting, and invite further study.

Relation between the Length of the Bacillus and its Virulence.—The results of Park and Beebe are not in accord with some others, who hold that the longest bacilli are the most virulent. The observations of the above-named authors show that the greatest mortality occurred in those instances in which the rods were shorter than the average, while there was a diminished death rate with the long forms, and a still lower rate with the evenly-stained short forms, with badly marked characters. Ample opportunity was afforded by the records of the Isolation Hospital for learning the clinical history of the cases there, and, from a comparison of such data with those obtained from the bacteriological examination, the conclusion to be formed is in accord with that arrived at in New York, viz.: that the size of the bacilli affords little on which to base a prognosis, but, if anything, the longer rods produce less fatal results than those of average dimensions.

Relation between the Pseudo and True Bacillus.—In view of the uncertain state of knowledge in regard to this point, and also taking into consideration the fact that the work at the Isolation Hospital was designed to be of a practical character, free from risk, no advantage was taken of the differentiation of these forms. All cases were treated as diphtheria in which an organism was found possessing the ordinary recognized characters. The results obtained have fully justified this course, and any observations, or statistics, given in this paper, must be understood as being subject to this condition.

It may be noted that a bacillus, identical in most of its characters with the true bacillus, but not possessing virulence, or at least not producing disease in the individual in whose throat it is found, and incapable of proving virulent to animals, has been detected in the throats of a considerable proportion of healthy persons. Hoffman, who identified these forms, was unable to decide whether they were merely attenuated diphtheria bacilli, or ordinary harmless saprophytes. The experiments of Roux and Yersin pointed to the former conclusion, but Escherich leans to the latter view, and the work of Park and Beebe, which included cultures from 330 healthy throats, showed the presence of bacilli of three kinds: 1. Virulent diphtheria bacilli, characteristic in growth, producing acid in bouillon (8 cases). 2. Bacilli identical with Lœffler's bacillus in cultural and acid-forming power, but non-virulent (24 cases). 3. Bacilli not having all the characteristics of the true organism, producing alkali in bouillon, and non-virulent (27 cases). These were all furnished in dispensary or hospital practice in New York, and in which there was no history of direct contact with diphtheria.

A further set of experiments, on cultures from the throats of persons belonging to fourteen families in which there had occurred diphtheria, revealed the fact that the true bacilli were found in 50 per cent. of the cases, and 40 per cent. developed, later, to a greater or less extent, the lesions of diphtheria. The examination included 45 children. These experiments have an important bearing on isolation, and this must be my excuse for a digression in a direction in which I have nothing original to offer.

Persistence of the Bacilli in the Throats of Patients.—Some observations have been made on this point. The shortest period for the disappearance of the bacilli, after the patient's admission to hospital, was five days, and the longest 42 days. A somewhat interesting case was that of patient No. 1820, an adult, in which, by the thirteenth day, the bacilli had entirely disappeared, and recovery was progressing rapidly. On the thirteenth day after this, and within one day of the termination of the stipulated period of convalescence, reinfection occurred, as evidenced by the clinical signs of the disease, and confirmed by bacteriological test. By the thirteenth day the bacilli had again disappeared and the discharge of the patient followed shortly after. This was a clear case of reinfection, and, taken in connection with the ascertained variability in the persistence of the bacilli, shows conclusively that a definite time limit cannot be placed to the period of convalescence, and that though a detention of fourteen days after the

disappearance of the exudate is a fairly well chosen term, it is sometimes too long for the safety of the patient, and often not long enough to prevent infection being carried by those who are discharged. Park and Beebe think that the isolation of patients should continue until cultures prove the absence of bacilli, and when such examinations cannot be made, at least three weeks should elapse after the disappearance of the membrane. During the past two months, as confidence has been established in bacteriological results, considerable advantage has been taken of such tests, as governing the discharge of patients, and, in no instance, has there been any reason to doubt the correctness of the conclusions.

Diagnosis by Examination of the Exudate.—The question is often asked whether, by a microscopical examination of a smear of the exudate, it is possible to make a diagnosis. In many cases a reliable conclusion can thus be formed, but, in others, it is quite impossible. Failure may arise from the fact that the bacilli are few, while other organisms are very numerous, and, as I have before stated, the characters of the Lœffler bacillus are, in the natural medium, often very difficult of recognition.

On looking over the records of the last hundred exudates examined I find that the bacillus was noted as being undoubtedly present 36 times, and as being probably present 39 times. In the other cases the organism was either not present, or unrecognizable. According to this it is possible to make, from the exudate, a sure diagnosis, in at least one-third of the cases, and to form a fairly correct idea as to the nature of about three-quarters. Negative results have not any diagnostic value, as failure to detect the bacilli does not necessarily prove their absence.

Number of Species of Bacteria Found in Cultures.—Considering the apparently fertile source it is quite remarkable that so few species are found in serum cultures. Miller isolated more than 100 species from the juices and deposits of the mouth, and it does not seem unlikely that a large proportion of these might reach the tonsils or pharynx. The greater number of such bacteria are derived from food, or air, and the mouth organisms proper, were found by Miller to be strictly parasitic, and not capable of cultivation on artificial media. This may possibly account for the small number of species represented by cultures from the throats of diphtheria patients, and the temperature at which cultures are grown no doubt exercises an inhibitory influence on many species. I have found that the range is confined to about 20 organisms, and the occurrence of some of these is quite rare. The species include Lœffler's bacillus, and pseudo form, the pyogenic staphylococci and streptococci, micrococcus tetragenus, white and pink yeasts, the diplococci of Frankel, and Friedlander, Pfeiffer's bacillus, streptococcus articulorum, bacillus mesentericus vulgatus, and other spore-bearing organisms.

Character of Pathogenic Organisms Found.—The following table shows the general character of the organisms present in 188 hospital cases, and 60 in private practice. The results are calculated in the nearest whole percentages :

	Hospital Cases.	Private Cases.
B. Diphtheriæ	36 per cent.	21 per cent.
" and streptococci.	11 " "	18 " "
" and staphylococci	10 " "	6 " "
" with strepto. and staph	19 " "	15 " "
Streptococci only	4 " "	16 " "
Staphylococci only	6 " "	7 " "
Strepto. and staphylo	12 " "	14 " "
Other organisms	2 " "	2 " "
Lœffler's bacillus present	75.5 " "	61.7 " "
" " absent	24.5 " "	38.3 " "

It is commonly supposed that Lœffler's bacillus is much more generally associated with cocci than is indicated by this table, but I can only give the facts as observed. It may, however, be explained that the cases of combination are understated, on account of the somewhat slower growth of cocci on serum, and it may also be said that the above figures refer only to cocci other than M. tetragenus. Observations of the cultures were, in all cases, made after 24 hours development, except those set on Saturdays, when twice this time elapsed. Cocci were found to grow in the shorter period, and there is no definite reason to conclude that a longer time in the incubator would have produced a different result.

The fact that nearly one-quarter of the cases admitted to the Isolation Hospital as diphtheria, were really not so, is a most important one, and points strongly to the necessity for "suspect" wards in institutions of this character. The isola-

tion should be perfect, and all patients should be detained in such quarantine until the results of a bacteriological examination are known. This seldom requires more than 24 hours, and, by the exudate, may sometimes be decided in a few minutes.

In the 5611 cultures, made in New York, from May, 1893, to May, 1894, and representing hospital, dispensary, and private cases, the specific bacillus was found to be absent in 27 per cent. of the cases. This agrees fairly well with the results obtained here.

Occurrence of Staphylococcus Pyogenus Aureus.—All cultures were laid aside, for fourteen days, after microscopical examination, so that the golden staphylococcus might reveal itself by its chromogenic character. It was found in 27 out of 188 cases, or about 14 per cent. It is significant that it was present in nearly 19 per cent. of the fatal cases.

Occurrence of Micrococcus Tetragenus. — The frequency of this organism, in diphtheria exudates, and cultures, calls for special remark. As judged by morphological characters I have found it to be present, either in the exudate, or cultures, in 91 per cent. of the hospital cases examined. This is, I think, a greater proportion than observed in health, but whether the fact is of any pathological importance I am not in a position to say.

Susceptibility as Influenced by Age and Sex.—The following table affords some data for arriving at conclusions on these points, but it is to be regretted that cases of true and false diphtheria are not separately enumerated. The percentages apply to the ages of hospital patients only :

7 years and under	50	per cent.
Between 7 and 14 years	21	" "
" 14 " 21 "	14	" "
" 21 " 28 "	10	" "
" 28 " 51 "	5	" "

The tables of Park and Beebe cannot be compared, item by item, with this, but it may, however, be concluded that young children are here much less liable to the disease, while adults are more susceptible than in New York.

The proportion of females to males was 56 and 44 per cent., respectively, figures which approximate very closely to those applying to New York.

Mortality.—The type of disease prevalent in Toronto, appears to be, relatively, of an average character. This is shown by the observed death rates in various American cities, as given in the last report of the Toronto Board of Health. A few of these figures may be reproduced :

Cleveland, Ohio	63.5	per cent.
Des Moines, Iowa	44.8	" "
Brooklyn, N.Y.	36.9	" "
Rochester, N.Y.	33.3	" "
Boston, Mass.	32.3	" "
New York, N.Y.	30.6	" "
Philadelphia, Pa.	29.0	" "
Detroit, Mich.	28.6	" "
Toronto, Ont. (1894)	27.9	" "
Toronto, Ont. (1892-3-4)	22.1	" "
Duluth, Minn.	19.0	" "
Harrisburgh, Pa	12.0	" "
Toledo, O.	11.7	" "

General health returns cannot be accepted as being as accurate as those of hospitals, where the facilities for obtaining statistics are complete and under perfect control. It will, therefore, be better to class the death rate of the Isolation Hospital with other institutions of the same class, of which a few records are at hand :

Sick Children's Hospital, Paris, average of 5 years	51.7	per cent.
English Hospitals, quoted by Drs. Washbourn, Goodall, and Chard, average	38.9	"
Trousseau Hospital, Paris	32.0	"
Willard Parker Hospital, New York, average 4 years	23.77	"
Willard Parker Hospital, New York, 1894	27.00	"
Isolation Hospital, Toronto, 1893	19.32	"
" " " 1894	14.05	"
" " " February to June, inclusive, 1895	18.08	"

In the Toronto returns there have not been any deductions for cases which were in a moribund condition when admitted, but every death occurring in the institution has been included. The low rate is highly creditable to Dr. Tweedie, the physician in charge, but nevertheless I think the conclusion may be formed that the bacillus is less virulent or the subjects more resistant in Toronto than in many other cities.

Organisms present in fatal cases.—Of the 34 deaths which took place during the last five months, there were 33 examinations of exudates, as in one instance the patient died a few minutes after admission and a swab was not taken. In

another case, that of an infant, twelve months old, in a moribund condition from membranous croup, the swab was unsatisfactory. The records of the 32 remaining cases were as follows :

Loeffler's bacillus only	37.5	per cent.
" " with streptococci	25.0	"
" " " staphylococci	18.7	"
" " " streptococci and staphylococci	18.7	"

The staphylococci were, in all cases, S. pyogenes aureus. No fatal results took place when only cocci were present.

Sex and age in fatal cases.—The proportion of males and females was respectively 44 and 56 per cent., being precisely identical with the ratio of affected cases.

Age is represented by the following percentages :—

2nd year	26	per cent.
3rd "	12	"
4th "	17	"
5th "	15	"
6th "	6	"
7th "	15	"
8th "	3	"
10th "	3	"
13th "	3	"

It will thus be seen that the mortality was 91 per cent. during the first seven years, while the number of patients under that age was 50 per cent. Of the 29 per cent. of patients over fourteen years of age not a single death occurred.

Sixty-seven per cent. of the deaths took place within five days after admission to Hospital, and 88 per cent. within eight days. The longest period from admission to death was fourteen days.

Relation between organisms present and severity of the disease.—I offer with great hesitancy any remarks on this subject, as some of the results indicated by my investigations are as surprising to me as they doubtless will be to others. I have, however, no reason to question the care with which the bacteriological observations were made, though in regard to the records of the character of the disease, it may be explained that such were not specially kept for this purpose, but were partly obtained during conversations with the Medical Superintendent, and partly from his rough notes of cases. Further experience and more perfect records may throw additional light on this subject, but in the meantime I venture to submit what I have up to the present observed.

In the appended table the cases have been classified as mild, severe, very severe, and fatal, and the proportion with reference to each organism or combination is given in round percentages :*—

	Mild.	Severe.	Very severe.	Fatal.
B. Diphtheriæ	46.6	11.2	22.5	19.3
" & streptococci	32.1	17.8	21.4	28.5
" staphylococci	27.2	18.1	22.7	31.8
" with strepto. & staphylo.	54.3	11.4	20.0	14.2
Staphylococci only	97.3	2.7	0.0	0.0
Streptococci only	100.0	0.0	0.0	0.0
Staphylo. and strepto	100.0	0.0	0.0	0.0

The general belief that the most fatal cases result from the association of Loeffler's bacillus with staphylococci, or with streptococci, is confirmed by the above figures, and the former combination is the most serious. It is, however, extraordinary that when both cocci are present with the Loeffler bacillus, the death rate is apparently reduced by one half. This would indicate an antagonism between the combined cocci and the bacilli—a supposition which I do not care to urge until further evidence is obtained, and this I shall take particular pains to procure. There are other interesting deductions which might be drawn from the above statistics, but I shall not further trespass on patience which must be already overtaxed.

WITH DÉJÉRINE AT THE SALPÊTRIÈRE.

BY W. CAMPBELL MEYERS, M.D., TORONTO.

Since the appointment of Doctor Déjérine to the Salpêtrière some seven months since, a marked change has taken place in the *service* which has been allotted to him. He has established a laboratory of normal and pathological anatomy, containing at present about three hundred brains and spinal cords, some of which are healthy, while others present signs of the most varied diseases. Here one also finds all the most modern appliances for cutting and mounting sections. These latter fill two immense cabinets, and afford an excellent opportunity for the study of the structure of the

* The table refers to pyogenic cocci only, and does not include Micrococcus tetragonus, which was present in 91 per cent. of the cases.

nervous system, from the smallest termination of a nerve to a section comprising a cut of half of the brain. All these sections are beautifully stained, and many of them showing the course of the fibres in different parts of the brain connecting the convolutions, are displayed in the large work which he has just published on the "Anatomy of the Nervous Centres." Before passing to the wards it may be mentioned that Dr. Déjérine has about two thousand beds under his care, of which five hundred are devoted exclusively to nervous diseases, the remainder being occupied by other diseases or by the infirm. His nervous cases are furnished not only from the inmates of the Salpêtrière, but also from his external clinic, of which I will speak later. Naturally among such a number of nervous cases all varieties of disease are met with. Some study of these patients show one about sixty cases of aphasia alone. These comprise all forms of the disease, some who are unable to read, write, understand or utter a word, others who can speak a few words either by their own effort or by hearing some one who is present pronounce them, others again who though able to speak, use the words incorrectly, whilst there are others to whom the power of speech has entirely returned, and in whom aphasia would never be suspected were it not for the history. Among the various cases of tabes dorsalis one is struck by the number in which the progress of the disease has been arrested by blindness, the disease apparently concentrating its action on the optic nerves, rather than on the posterior columns of the cord, and leaving these latter more or less uninjured. The persistency of the lightning pains is an interesting feature of many of these cases.

There are also a number of cases of peripheral neuritis, some exhibiting the wasting, hyperæsthesia, loss of reflexes, etc., common to this disease, while others have more or less completely regained their former health. Several cases also of syringo-myelia, in which the change in sensation characteristic of this disease (retained tactile sensibility with loss of that to heat and cold) are clearly shown. An interesting case of tumor of the cerebellum in a girl aged twenty-four, which dates from two years, with characteristic gait, a tendency to fall backwards, always towards the right side, optic neuritis, lightning pain in legs, loss of tendon reflexes, with marked disturbance of sensibility. There was a case of astasia-abasia in which the vertigo and peculiarity of walk is associated with loss of tendon reflexes. A case of amyotrophy, implicating the face, scapular region, and upper arm only, in a woman of twenty-five, and in which a fatty degeneration of some of the muscles had taken place, being an excellent example of this disease as first described by Landouzy and Déjérine a few years since. Several cases of multiple sclerosis, in one of which the disorder of movement was so great as to absolutely prevent the patient using her hands. Lack of space forbids my mentioning many other interesting cases which an acquaintance with these wards presents, such as myelitis in its various forms, chorea, hemiplegia, Basedow's disease, etc., all of which contribute largely to the literature of nervous diseases which Dr. Déjérine has recently brought before the profession. It is necessary, however, to speak of the out-patient department, which has so rapidly increased in size of late. It has now become a very important part of the work done in this hospital, Dr. Déjérine seeing from seventy to eighty patients on his consultation days. He also gives a course of instruction on nervous diseases during the session in this department, and this course is already attended both by foreigners and students almost as largely as that of the late Prof. Charcôt.

In conclusion, I may say that Dr. Déjérine is about forty-five years of age, and is by birth a Savoyard. He is Vice-President of the Biological Society of Paris, and by his genial manner and indomitable energy in his work he is rapidly attaining the position of the first neurologist in France to-day.

Selected Articles.

AORTIC ANEURISMS. THEIR PRESENT STATUS WITH REGARD TO TREATMENT, MEDICAL AND SURGICAL.

I have been led to the consideration of this subject because toward the close of my recent service in the Long Island Hospital, there came into my wards a case of abdominal aneurism, either of the cœliac axis or of the aorta itself, which had been subjected to medical treatment in the New York Hospital some months before, but without much benefit. The tumor seems to be just beneath the

peritoneum, and appeared to be of a nature to warrant operative interference, provided appropriate medical treatment proved after a fair trial ineffectual. Before venturing on any operation, I thought it but just to my patient to take a thorough survey of the field, making careful inquiry into the methods of the present day, in order to determine whether the results of surgical interference were sufficiently promising to induce me to make an attempt to cure the aneurism by operative procedure. I desire to lay the results of my investigation before the Society this evening, because I deem the subject of much importance. Sufferers from aortic aneurism are common enough unhappily. Not a year passes in our large city hospitals without the admission into the wards of one or more of these cases, which, as a rule, leave the hospital by way of the dead house. I have been astonished at the frequency with which cases of this sort have been reported in the journals. Every number of the *Index Medicus* for five years past has contained at least half a page of references to this subject, so that the cases which have been reported in that time must number several hundred, to which must be added the very numerous class which never reach the journals at all. All ages are the subjects of this affection. I have found a case recorded in the St. Petersbugh *Medicinische Wochenschrift* in which an aneurism of the aorta appeared in a child of twelve years, and there has been another case published in which the age of the patient was 72. Four-fifths of all the cases, however, occur between the ages of 30 and 50. I was under the impression that the duration of life in patients suffering from aortic aneurism was much longer than it is, for I find on investigation that 75 per cent. of the cases die within two years, and that out of a series of 40 cases observed by Garland, but three survived for five years. Without interference, practically all these cases walk in that path which leads by a short cut to the grave. To this fact must be added another very important consideration, namely, that there is scarcely any disease which is the cause of greater physical pain, which is accompanied by so many crises of mortal agony. A patient with thoracic aneurism suffers all the pangs of dissolution a hundred times before death actually comes to his relief. The grim spectre is ever at his elbow. In the full possession of all his faculties he knows not what moment may be his last. Often he cannot lie down at all, but must seek his rest in a reclining chair. His breath comes in gasps. His body is racked with pain from the pressure of the tumor on sensory nerves. All his vital functions are compromised by the interference of the tumor with the phrenics and pneumogastrics. Even his voice is taken away. If any condition of prolonged and hopeless physical distress ever is a justification for suicide, then such a condition we have depicted. At present it seems that the attitude of many of our hospital men is such as to discourage any attempt on the part of the surgeons to bring relief, if even but temporary, to these unhappy victims. If medicine does not relieve them, they are abandoned as hopeless cases. Perhaps they are, yet their condition is so pitiable, their fate so certain and so speedy, that it does seem to me to be one of those emergencies in medicine, where we are justified in taking exceptionable risks for our patient. These are not of those cases, where with non-interference the patient may live a long time. Their lease of life, as has been shown, is but short, and in the event of the failure of medical treatment, which should always receive a fair trial, it does not seem to be an unjustifiable risk to resort to operative measures which promise even a remote prospect of relief, if not of eventual cure. I have said that I believe in preliminary medical treatment, that is, of all cases in which the duration of the disease has been but short and where there are no symptoms which point to early rupture.

The methods of medical treatment may be divided into two classes: first, that method by rest, diet and medication, which is a modification of the treatment of Valsalva. Second, that by medication alone with the iodide of potassium, the patient being left to follow his ordinary vocation. With regard to the methods of Bellingham and Tufnell, it may be remarked, that they depend for their success first, on the diminution in the number of pulsations, which the contractile force of the heart communicates to the sac. Tufnell's rule is that the pulse be reduced to sixty per minute. Let us consider to what extent this reduction must affect the hydraulic action of the blood on the aneurism. It is to be remembered that a sacculated aneurism communicating with the aorta by a comparatively narrow orifice, presents the physical characteristics of a hydraulic press. We have a large chamber communicating by a small orifice with the aorta, the heart being the source of the power. We know the immense multiplication of the initial force which is secured in this manner in the press. This explains the enormous destructive power of the sac on surrounding tissues. Now if we slow down our pump 20 strokes a minute, it is evident that we diminish the number of blows which the blood, a totally incompressible fluid, delivers on the walls of the sac 28,800 a day. I have assumed that a person engaged in the ordinary avocations of life will average about 80 pulse beats a minute. This includes the acceleration which is occasioned by extra muscular effect, and if from this estimate we deduct the 3,840 beats required by the average pulse of 72 during eight hours of sleep, we shall still have a reduction of over 25,000 beats per day, or to reduce this to percentage, we have the aggre-

gate daily strain from hydrostatic pressure lessened by 25 per cent. But in the Valsalva-Tufnell treatment it is not alone the number of the heart blows which are lessened but also their force. Rest alone will reduce the number of the beats considerably, and the volume of the pulse is lessened as well, perhaps to an equal extent, by the regimen which includes not only the reduction of the amount of solids to the smallest extent that is consistent with the preservation of life, but also in the withdrawal of all fluids to a similar extent. These two factors, the reduction of the number of the heartbeats to the minimum, and the simultaneous reduction of their volume constitute the whole philosophy of this method. Certain details of the older methods of attaining this result are now known to be unnecessary, such as the frequent bleedings of Valsalva, but the rationale of the method is sound. We know that the laminated white clot which forms the protective barrier against the hydrostatic pressure within the sac, does not form a layer of equal thickness throughout the interior. It is thickest in those portions of the sac which are out of the general current, so that the blood forms there a sort of eddy with very slow motion. It is evident that any unusual force of circulation arising from occupation, unusual exertion, or peculiarity of posture must have a disquieting influence on the blood at these points of rest within the sac, the maintenance of which during a long interval is essential to the uninterrupted deposit of fibrin within the aneurism. The more complete and absolute the rest, the more rigidly the recumbent posture is maintained, the less the disturbance of these eddies within and the greater the chance of cure. Another element in this process of cure not to be overlooked is the fact, that as the volume of the blood is decreased its coagulability is increased. I have seen patients that have been subjected to this rest cure, if you please to call it so, in whom I am sure that the essential principle of absolute rest was not carried out as rigidly as possible. All avoidable muscular movement should be absolutely prohibited. The most that should be permitted to the comfort of the patient is the occasional assumption of the semi-recumbent position. He should never be allowed to assume this posture with the aid of his own muscles, but should be assisted by others. He should not feed himself, but should be fed by a nurse. His arms should be used as little as possible, never to hold a book or to assist himself. Every movement, however slight, increases the force and number of the pulsations of the heart, and the resultant is a force multiplied as many times as the area of the sac exceeds the area of communication of the aneurism with the artery. It is this fact that, as I have before suggested, make these affections so formidable. We are dealing with a hydraulic press whose walls are not of iron but of yielding tissues, and the power is exerted not to lift a weight as in the mechanical appliance with which we are all so familiar, but in stretching the tissues which enclose the power. Therefore, every unnecessary heartbeat is an additional blow against the patient's life, and diminishes his chances of recovery. Therefore rest in this method of treatment should be as absolute as circumstances permit, and the necessity of complete muscular inaction should be impressed on the patient so that when not watched, he may not engage in the slightest exercise. Such a patient should not raise his hand to his head. Drugs have been administered to diminish the force of the circulation, notably aconite, veratrum viride, and hydrocyanic acid. If the pulse cannot be brought down to sixty, the use of aconite seems to be desirable. Hydrocyanic acid has the reputation of alleviating pain as well as reducing the rate of the pulse. In cases accompanied by much suffering this drug may thus accomplish a double purpose. I am somewhat at a loss to understand the reason for the administration of the iodide of potassium in connection with this mode of treatment. Certain it is that iodide has the power of *diminishing* the coagulability of the blood, the very factor of safety on which we must depend and which it is our object to increase to the uttermost. The treatment of aneurisms by the administrations of this drug, I have classified as the second method of attempting cure by medical measures. It was first used by Dr. Chuckerbutty, of Calcutta, its most prominent advocate in recent times being Balfour. When we come to an investigation of the cases reported in which the iodide has been of benefit, I confess that I am unable to be as enthusiastic in its praise as are some of my friends and colleagues. Balfour, up to 1872 had published an account of 12 cases, in which amelioration had been effected by the administration of the drug. In not one of these cases was the aneurism reported as cured. The statement is simply that the pulsations became less vigorous, and that there was a diminution in the volume of the tumor, in one case leading to its almost complete disappearance. This, be it remembered, is the report of the most enthusiastic supporter of the iodide treatment. A number of other writers have also reported cases in which considerable improvement has followed the administration of this drug. The authentic cures are, however, few and far between. Barwell Holmes and Sir Wm. Gull all report somewhat emphatically against the drug; Dujardin Beaumetz says: "For my part, the more I examine into the cases in which I have obtained amelioration and even cures by iodide of potassium, the more I am convinced that this medicine acts not on the sacculated aneurism with a pouch . . but on such cases as are simply

cases of aortitis with dilatation of the vessel." Such cases as these, it seems, are exactly the conditions which we should expect in a large vessel the subject of a primary endarteritis which in a small vessel leads to obliteration, but in a trunk of the size of the aortic is followed by dilatation, from a weakening of the muscular and fibrous coats. Such a lesion may well be syphilitic, and is one which we should expect to be benefited by a course of the iodide. Nor is it at all strange, that the succulated aneurisms should pulsate less vigorously during the administration of the iodide. All the potassium salts are depressors of the heart's action, and when we take into consideration that the initial dose recommended by the promoters of this treatment is from 5 to 10 grains, to be increased until the patient is taking 90 to 400 grains a day, it is not at all surprising that the pulsation of the tumor should diminish, and as its nutrition is impaired with all the other tissues of the body, its size also.

Notwithstanding the adverse criticisms which have been made on the use of the iodide, as it can do no immediate harm, it ought still to be tried, if not in all cases, at least in those where there is even but a suspicion of syphilitic taint.

I pass on now to a consideration of the surgical treatment of those cases of aneurism, which, having resisted all medical treatment, are yet evidently rapidly advancing to that point where it is evident that they will carry the patient off from overwhelming hæmorrhage due to rupture of the sac. The first question, which it is fair to ask ourselves, with regard to such a case, may well be, whether we shall abandon the patient to his inevitable fate without making any effort to evert it? The final decision of such a question must, no doubt, rest with the patient himself. If we can only say to him, to assist his decision, that he is absolutely beyond our skill, and that any effort on our part, to give him relief by surgical means, will result only in a speedier death than that threatened by the disease, even though the patient asks for operation, we must refrain, for we have no right to assist him to commit suicide. Intense though the sufferings of the patient may be, to us has never yet been given the right to produce euthanasia. It may be a question in casuistry to decide just when it is ethical for us to advise such a sufferer to take a great immediate risk for the very remote hope of benefiting an otherwise irremediable condition. I myself think that if there is any hope whatever, however remote, under the conditions stated, it is right for the surgeon to make the statement clearly and fully to the patient, and then if he is willing, knowing all the risks of the procedure, to give him the benefit of a chance which may be but one-tenth of one per cent. His risk otherwise is total.

There is only one way by which we can expect to benefit aortic aneurisms, and that is by inducing in some manner the formation of the hard, white clot, the so-called active clot, which alone can present an effective barrier to the hydrostatic pressure on the walls of the tumor. Some of the methods, which I shall briefly mention, have been deficient in just this particular, namely, that instead of favoring the deposition of the active clot, they have instead promoted the formation of the soft and soluble passive or red clot, which has soon been re-absorbed, or, breaking down, made its appearance elsewhere as an embolism. The method of injecting a coagulating fluid into the sac, was one of the first means that surgeons adopted against these tumors. I have already stated the objections to the method, which, in aneurisms of the arch, would be insuperable, because of the danger of embolism of the great blood vessels of the brain. Although the production of embolisms in the blood vessels of the extremities might be prevented for a time by compression of the abdominal aorta, the soft nature of the clot absolutely forbids us to expect anything but harm as a result of these injections. I believe that they are totally unjustifiable. The introduction of foreign bodies into the sac is a method which is comparatively recent, originating with the late Dr. Moore, of Middlesex, England. In 1864, he introduced into a thoracic aneurism twenty-six yards of fine silver wire through a fine canula. The patient died on the fifth day thereafter from inflammation of the sac, the surrounding parts and embolic infarcts in the kidneys. I can find no record of the findings as far as the condition of the sac is concerned, and the character of the clot, induced by so large a quantity of wire. The occurence of an inflammation in the sac so intense as to extend to the surrounding parts certainly suggests that sepsis had more to do with the unfortunate result of this case than the mere introduction of the wire, and the infarctions in the kidneys increase this probability. This case cannot fairly be cited as unfavorable to the method. Many other similar cases are cited in the journals, in which this procedure was resorted to before the days of antiseptic surgery, and certainly no one can conceive of a more dangerous procedure than the introduction into an aneurismal sac of material of whatever nature, which was not itself entirely sterile; the most recent cases reported in this vicinity, in which this method was adopted, I find in the *Medical News* of April 9, 1887, both reported by Dr. Abbe, of New York. In the first case, seventy-five yards of No. 00 piano wire was used, and subsequently a current of electricity passed through the coil, as the reporter says. Result, death on the twenty-second day. In this case no autopsy was allowed, therefore it is impossible to say what was the condition of the clot within the sac, which is perhaps the most important question to be settled, if we are to come

to any decision as to the desirability of continuing these attempts with wire. Two comments may be made on this particular case. The first is with regard to the material used. If I were asked to select the most unsuitable form of wire for this purpose, I should choose piano wire, which possesses the highest degree of elasticity and spring, and introduced into a thin or even a thick sac, is certain to exert dangerous and constant pressure on the interior of the sac wall. It must, as far as I can see, become the reverse of the elastic ligature, exerting a constant pressure from within outward. I confess I should have expected a fatal termination much sooner. The utility of introducing such an enormous quantity of wire may also be doubted. It must take a long time, and the larger the amount of wire which we are obliged to handle, the greater is its liability to become infected, no matter how carefully it has previously been sterilized. In the second case, which Dr. Abbe reports, he first introduced 100 feet of No. 1 catgut. This procedure was followed by a rise in temperature to 102° F., which subsequently subsided. The effect on the tumor was not permament, and nine days thereafter the reporter introduced 150 feet of fine steel wire, and passed a current through the wire, the other electrode being a copper plate placed on the patient's back, thirty-six cells of battery used, kind not mentioned. The current was continued for an hour, at the end of which time the patient was reported to have suffered not at all from the operation, either from shock or pain. He died on the second day thereafter from rupture of the sac into the trachea. The same criticisms seem to me to apply to this case as to the previous one. Steel wire in such a quantity must have exerted considerable pressure outward on the walls of a very thin sac, and it does not seem to me to make much difference that the tumor is said to have ruptured at a point not in contact with wire. As a matter of fact, so large a quantity of springy wire within this sac must have exerted considerable outward pressure, and naturally the sac would burst at its weakest point, as it did. In speaking of the use of electricity in connection with this coil of wire, I infer that the reporter expects the current to pass through the entire coil, as he speaks of three cases in which electricity was passed through an extensive wire coil, in his résumé of the subject. It is possible that he overlooked the fact that electricity takes the shortest path and that of least resistance between the two electrodes, and that as his coil is not insulated, the current must pass in a straight line across the contiguous coils instead of around the entire coil, and as these points are points of contact there can be no electrolytic action at all. If in the ordinary operation of electrolysis, the poles are made to touch, the current passes from one pole to the other without any influence on the fluid whatever, and this is what must have happened in both of Dr. Abbe's cases. This is almost absolutely certain in the first, for who can imagine a current from thirty-six cells passing through a fluid medium for one hour without the production of gas within the sac, provided there had been any electrolytic action whatever. Yet Dr. Abbe expressly states that there was nothing of the sort. It seems to me that catgut is not a material which ought to be used in this connection, as however sure we may be that its exterior is sterile, as it is not possible to boil it, we can never be sure of its sterilization within. Moreover, as it is soon absorbed, and as the firm, white clot upon which we rely is deposited slowly, it cannot be depended upon as a basis for this formation.

(To be continued.)

ON THE TREATMENT OF FLATULENCE.

There are probably few disorders of common occurrence which, without being of a serious nature, give rise to so much discomfort as flatulence. The malady is the constant companion of a large number of persons, which takes away from them the full enjoyment of life. I exclude from consideration in the remarks I am about to make, cases of gastrectasis and organic disease of the stomach and intestines; and it is therefore of flatulence in association with functional diseases of the digestive organs, or as the sole or chief complaint, of which I shall speak.

In the class of cases with which we are concerned, flatulence occurs under a variety of conditions. It is most frequently met with in connection with slight degrees of chronic gastritis; it sometimes is one of the symptoms of acid dyspepsia; whilst in many cases neither of these conditions is present, but the patients are sufferers from atonic dyspepsia. The flatulence may be of the stomach, or of the intestines, or of the two combined. The usual story we hear from the patient is as follows:—Soon after a meal, but sometimes quite independent of the ingestion of food, a feeling of fulness at the epigastrium is experienced. The sufferer feels he or she would like, and sometimes is compelled, to loosen all constricting garments round the waist. A horrid sense of oppression is felt, a difficulty of breathing, with sighing respiration, is experienced, and often there is palpitation of the heart. Not infrequently flushing of the face occurs, and sometimes the hands and feet are cold. In extreme cases the patients have a distressing feeling, as if they were about to lose themselves; or actual vertigo occurs. In many cases the symptoms persist for an hour or two, and gradually subside. Or, happier, the cardia relaxes, some upward escape of gas takes

place; after which, if sufficient, rapid relief occurs, the oppression is removed, the breathing becomes easy, the palpitation disappears, and the other symptoms subside. The above description applies to cases which are mainly gastric. When the flatulence is intestinal, great tightness of the abdomen is experienced, it is distended and tight as a drum, pain is felt usually in the left hypochondrium, and loud rumbling noises are heard in the bowels. If downward escape of gas occurs, the relief may be rapid, otherwise the discomfort may continue for hours.

What is the explanation of flatulence? What causes the distension of the stomach and bowels? Various theories have been advanced to explain the phenomena:

(1) *Swallowed air*—A certain amount of air is swallowed by all persons in the processes of mastication and deglutition, the air being incorporated with the bolus of food; but there is no reason to believe that more air is swallowed by sufferers from flatulence than by healthy persons. It is a physiological process.

(2) *Fermentation.*—It is thought to be due to fermentation processes occurring in the food in the stomach. This is a view very commonly held, and which apparently receives some support from the effects of antizymotic drugs in the treatment of flatulence. The subject, however, is one of much complexity and difficulty. The remedies most used, such as creosote and carbolic acid, are weak antizymotics, and are given in such small doses that it is scarcely credible their action is so simple as to arrest fermentation and decomposition. Dr. Maguire has made some very sensible and valuable remarks on this subject, showing that, in quantities in which these remedies are used in treating disorders of the stomach, they must be practically inert as antisceptics, though he fully admits their efficacy. Moreover, Sir William Roberts has pointed out that fermentative processes are too slow to account for the rapid development of flatulence in dyspepsia; and he believes that fermentative processes, whether toruloid or bacterial, can only take place when food is retained in the stomach for a very long time; twenty-four or forty-eight hours, or longer. We must therefore dismiss fermentation of the contents of the stomach as the source of the gas in the stomach in cases of ordinary flatulence.

(3) *The evolution of carbonic acid gas in the stomach* due to the action of residual acid mucus in the alkaline saliva swallowed with the food. This, as pointed out by Sir William Roberts, is a possible cause of flatulence in acid dyspepsia. In many cases of flatulence, however, there is no evidence of acidity, and it will not, therefore, account for all cases.

(4) *Regurgitation of carbonic acid from the duodenum.*—This, again, is a possible source of the gas that distends the stomach; but it can occur, probably, only when the gastric juice is hyperacid, or otherwise it would be of much more common occurrence in the healthy.

(5) *Want of gastric tonicity.*—Most of the sufferers from flatulence are the subjects of atonic dyspepsia, in whom there is no evidence of excess in quantity or altered character of the gastric juice, but in whom the muscularity of the stomach, often in association with a general flabbiness of the whole muscular system, is at fault. Thus it happens that when food is taken into the stomach this organ, instead of bracing itself to its work of muscular activity, so as to move its contents about by vigorous peristaltic contractions, *relaxes*, and the gas always present in the stomach, without undergoing any augmentation in *quantity*, undergoes an augmentation in *volume*, occupies a greater space, distends the viscus, impedes the descent of the diaphragm, causing an impediment to breathing, pushes up the heart, causing palpitation, and by a reflex process, gives rise to the other symptoms which are so frequently associated with flatulence.

The proofs that tonicity of the stomach is at fault are numerous. The great majority of sufferers from this complaint present, if sought for, evidence of nervous exhaustion or nervous instability produced by a multitude of causes. This view that flatulence in general is caused by a want of tone of the stomach, is also confirmed by the effects of treatment. In most cases relief is obtained, not by dieting, which, apart from correcting gross errors of management, is of little avail; not by correcting acidity, which is frequently absent; but by measures which, by improving the general health, increases the nervous vigor of the body and the tonicity of the gastric muscularis.

That nervous influences are capable alone of bringing about flatulence there is abundant evidence to show. All are familiar with hysterical flatulence—how suddenly it appears, quite independently of food. Again, it has fallen to the lot of many to witness the sudden and intense flatulence, gastric and intestinal, which occasionally supervenes on some severe nervous shock. Or, again, many have witnessed the intense tympanites which occasionally occurs in the moribund when the *vis nervosa* is exhausted. One of the most striking instances of this sudden distension of the stomach by gas I have known occurred in the person of a late and, at one time, very popular poet. His account of his sufferings was very instructive. He told me that when he commenced walking he could feel his stomach swelling, his breathing became difficult, and the oppression was so great he was compelled to stand still. He would remain for some minutes, often in front of a house, and told me he was sometimes afraid of being arrested

for "loitering with felonious intentions"—a charge from which his portly frame, venerable appearance, and benevolent expression sufficiently protected him. As he stood still he would gradually feel the stomach become smaller and smaller, his breathing was relieved, and he would be able to resume his peregrinations. The same thing would occur sometimes two or three times in the course of his morning walk. There was no disease of the heart, no marked emphysema, but the patient had a feeble digestion. I believe that what occurred was that, with a feeble muscular and nervous system due to his sedentary habits, in the muscular efforts of walking he used up his little store of nervous energy, and his stomach, yielding to the pressure of the contained gas, became distended. When he rested, the nervous energy previously expended on the exercise returned, and the stomach regained its natural size by increased tonicity.

The great majority of cases of flatulent dyspepsia are patients who have got into a condition of impaired nervous vigour. As we all know, the causes of such a state are legion. Excessive mental application, with its attendant sedentary habits, or the latter alone without the former, are frequent causes. The want of attention to maintaining the full vigor of the body is alone sufficient. The excessive use of tea and coffee or the abuse of tobacco, too great strain on the sexual powers, and all other causes that bring about a debilitated or unstable condition of the nervous system, are capable of inducing an enfeebled condition of the digestive organs, constituting what is often described as "nervous dyspepsia." Indeed, whether we approve or adopt this term for the complaint or not, I believe it expresses the general truth that in the class of cases I am discussing the flatuency is essentially due to a lack of power in the nervous system, inducing a deficient tonicity of the muscular coat of the stomach. As already said, it is frequently associated with gastric catarrh, which contributes to its causation when present. In such cases the tongue is coated and often indented by the teeth, there is pain after food, and tenderness in the epigastrium; it is often—indeed, generally—accompanied by constipation. In some cases there is pain in the left hypochondrium and borborygmi, relieved or removed by downward discharges of gas. But in many cases the functions of the stomach and bowels are in other respects well performed, the tongue is clean, there is no pain after food, no acidity or heartburn. It sometimes occurs independently of food.

Having explained what I hold to be the essential nature of the complaint, I pass on to deal with its treatment. The first thing is to correct what is wrong in the life and habits of the patients. It is usually found they are, consciously or unconsciously, overtaxing their nervous powers rather than overloading their stomachs. Hence it is usually of greater importance to prescribe longer hours of rest in the recumbent position than to order a rigid or restricted dietary. Of course, obviously indigestible food—such as uncooked vegetables—and dietetic articles found by experience to disagree should be avoided, but a varied diet should be encouraged. The morning bath, and outdoor exercise short of fatigue, and everything that makes for health should be encouraged.

We come now to the drug treatment. The chief thing is to aim at increasing the nervous vigor, and hence tonics, especially nervine tonics, are of the greatest importance. Pre-eminently stand nux vomica and its alkaloid, strychnine. If one were restricted to a single remedy, the choice would certainly be strychnine. When flatulence is associated with pain after food, and a coated tongue indicating gastritis, the following prescription should be given :—

℞—Potassii bicarb. vel sodii bicarb., . ʒ ij.
Sp. ammon. arom., ... ℥ jss.
Liq. strychninæ, ... ♏ xxx.
Sp. armoraciæ co. vel sp. cajuputi, ʒ jss.-ʒ ij.
Sp. chloroformi, ... ʒ j.
Infus. calumbæ vel gentianæ co.,* ad. ℥ vj.
M. ft. mist. A sixth part three times a day between meals.

The alkali and bitter clean the tongue and correct the disordered state of the gastric mucous membrane. The strychnine braces up the muscularis, whilst the carminatives, horseradish or cajeput, and chloroform excite reflex contractions of the stomach. If the pain in the stomach is great, one drachm of Schacht's liquor bismuthi should be added to the mixture. In addition to the above, the following pill should be prescribed :—

℞—Acid. carbolic., ... gr. xij.
Zinci valerianat., ... gr. xx.
Aloinæ, ... gr. vj.
Ext. nucis vom. gr. ¼, vel strych., gr. $\frac{1}{16}$.
Oleo-resin. capsici, ... gtt. j.
M. ft. pil. xij. One pill night and morning.

The aloes to be omitted when the bowels act sufficiently; but in the great majority of cases constipation is present, due to torpor or want of tonicity of the colon, producing intestinal flatulence. Of the value of carbolic acid in such cases

* In prescribing vegetable infusions as stomachics, it is of the utmost importance that they should be recently prepared. Concentrated infusions are an abomination. We all know the difference between a cup of coffee made from so-called "essence of coffee," and a cup of coffee prepared from the recently roasted and ground berry. The one is a very nasty compound, the other a very grateful and refreshing stomachic beverage.

I have not the smallest doubt, in spite of the difficulty, as already stated, of explaining its action. Menthol or creosote may be used to replace the carbolic acid, although the latter is, in my experience, by far the best. Pil. assafœtidæ co. is also of much service, and may be used instead of the valerianate of zinc. When there is much tendency to spasm, $\frac{1}{4}$ or $\frac{1}{3}$ of a grain of extract of belladonna is a useful adjunct. In many cases where there is habitual constipation with frequent flatulence, this pill should be taken, with any of the modifications suggested, for months together; and patients whom I have watched for years, go back to such a prescription from time to time with invariable relief. When acidity is present, the same mixture and pill are frequently efficient, the alkali given between meals correcting the acidity in the residual mucus. In obstinate cases the bismuth lozenge of the Pharmacopœia, or, better still, the modification of it suggested by Sir William Roberts, sucked slowly between meals, is sometimes of service. When, as not infrequently happens, there is no evidence of gastritis or acidity, tonics should be given between the meals. Quinine and strychnine are the most important. They may be combined with iron, often with advantage; and Easton's syrup, or the compound syrup of the hypophosphites, are convenient forms of administration. When, apart from gastritis, there is marked pain — gastralgia — which occurs independently of food and is often relieved by a meal, arsenic is often of great service. It may be added to either the mixture or the pill. In enteralgia, Indian hemp often answers better than any other remedy, and may be given with the pill, in doses of $\frac{1}{3}$ of a grain, twice or three times a day. For the violent spasmodic attacks with great distension of the stomach and intestines, to which some sufferers from flatulence are liable, and which cause so much distress and often excite severe anxiety in both patients and their relatives, a powerful carminative and antispasmodic mixture should be in the hands of the patient, to be used whenever the attacks occur. The following is nearly always efficacious :—

℞—Sp. cajuputi,
Sp. ammon. arom.,
Sp. chloroformi, ... āā ℥ ss.

M. ft. mist. "The antispasmodic mixture." One teaspoonful in a wineglassful of water every half-hour or every quarter of an hour, until relief is obtained.

A mixture such as the above relaxes spasm of the cardia pylorus, and intestine; causes reflex contractions of the muscular coats of the stomach and bowels; and, by permitting and promoting the escape of gas, affords prompt relief in nearly every case. After considerable experience of the use of charcoal, I am of opinion that it is of little service in ordinary cases of flatulence. Permeated as it must be with saliva when taken in the form of biscuits, mixed with the fluid contents of the stomach, its powers of absorbing gas must be extremely small; and, as we have seen, putrefactive changes, over which it might have some action, are not in operation in such cases. The cases in which charcoal biscuits are useful in flatulence appear to me to be those with acid dyspepsia, where, like the bismuth lozenges, it causes an extra amount of alkaline saliva to be swallowed, which may lessen the acidity of the mucus in the stomach. The gist of my paper, however, is to urge the importance of tonics and antispasmodics as the rational and effective treatment of flatulence, by improving the muscular tone of the stomach.—Stephen Mackenzie, M.D., F.R.C.P., in *Pract.*

DUST.

Of the agencies which affect the well-being of mankind, there is probably no other so potent as that of the minute particles—organic and inorganic or mineral—floating unnoticed in the air we breathe, and, until recently, unknown.

The grosser dust which so unpleasantly affects us in dry and windy weather is undoubtedly annoying, but its influence is insignificant when compared with the effects produced by the minute particles invariably present even in the clearest and purest air. These particles may be divided into two great classes, living organisms, generally known as micro-organisms, microbes or germs, and dead and inert organic matters and inorganic particles. These latter may be termed cosmic dust and extend into the highest strata of the atmosphere which have been examined, but those bodies which are endowed with life are fortunately rapidly destroyed by fresh air, and probably also by light, so that their presence is most noticeable in the populous districts.

The medical action of these minute denizens of the air has been so frequently described in our journals that their pathological significance is well known to most of us, and it is fully recognized that we may attribute to them many, if not most, of the epidemics from which we suffer.

Unlike the inorganic particles, whose minuteness renders them capable of almost indefinite suspension in the air, the organisms are of such a size that they soon subside in still air, and it is due to this fact that the admirable methods now adopted for ascertaining their number and nature have been possible. Most of our knowledge of the subject has been obtained by modifications of a process devised by Hesse and elaborated by Professor P. F. Frankland and many others.

Hesse drew a known volume of the air to be tested into a long glass tube coated internally with "nutrient gelatin," a soft jelly which feeds the organisms and enables them to rapidly multiply. The jelly and tube were "sterilized" by heat before the experiment, and the tube was carefully closed with sterilized cotton wool after the air had been drawn in, so that the organisms found must have been contained in the volume of air examined.

The air in the tube being perfectly tranquil, the micro-organisms, which are so various that it is impossible to call them by a more specific name, soon settle, and rapidly multiply with the production of a small whitish patch known as a "colony," and plainly visible. As each colony is derived from a single parent we can ascertain the number of the organisms by merely counting them. It is to various modifications of this simple and ingenious device that much of our knowledge relating to such organisms is due. At first, most of the experiments were directed merely to ascertaining their number, but considerable progress has been made of late in the branches of biology dealing with their proportions as individnals. The subject is, however, of such extent that it cannot be dealt with here, and reference must be made by those interested, to the numerous published accounts in scientific journals on the subject.

Professor Franklin has published some interesting experiments showing the relative prevalence of micro-organisms at varying altitudes. In two gallons of air in the churchyard of St. Paul's, he found 70 microbes; in the same volume outside the Stone Gallery 34, and in that outside the Golden Gallery only 11. These remarkable differences are partly due to mere dilution of the impure by pure air, and partly to the germicidal power which pure air is found to possess. In two gallons of air in a street in South Kensington 554 organisms were found on a dusty day, while that volume of air on the Surrey Hills on a fine day contained only 2.

When we realize that not only disease but all putrefaction and fermentation, and perhaps all the changes which naturally occur in dead organized bodies, are due to these microbes, and when we read of the extraordinary precautions necessary to isolate the air under examination in order to prevent other organisms from entering and affecting the results, it is easy to understand how tenaciously the older experimentalists adhered to the theory that life could be generated spontaneously.

It is exceedingly surprising to learn that the air in our sewers when the liquid contained in them has not recently been disturbed, actually contains fewer microbes than the outside air, but it has been conclusively proved by the late Dr. Carnelly and others that this is the case, and the singular immunity from contagion enjoyed by those who work in our sewers is by it to some extent explained.

It must not, of course, be imagined that all microbes are injurious to mankind. Many are actually extremely beneficial, and it is certain of them that the mellowing of cheese, the not unpleasant change which occurs in butter on keeping under proper conditions, the natural fermentation and souring liquids, and even the mellowing of some fruits must be attributed.

So much for the living. Let us now turn our attention to the inorganic particles whose influence —mainly for good—is of such importance to us. These particles vary in size from the coarse dust which, literally, "meets the eye," to the invisible particles before called comic dust. Only the latter require treatment here, and it is perfectly correct to say that but for them, life as we know it could not exist.

The blueness of the sky is due to innumerable reflections from myriads of dust particles, and it is to them also that light is transmitted from all parts of the heavens instead of only appearing from the part in which the sun happens to be located. Professors Langley and Pickering have calculated that the loss of light by a ray of light entering our atmosphere at the zenith, under which condition it traverses the shortest possible length of air, is about half, the remainder being mainly reflected and diffused by comic dust. It would probably be no exaggeration to say that but for this dust, the sky would always be intensely black except where the light from the sun, moon and stars passed through, and that the sun's rays would possess sufficient intensity to destroy every living thing.

One of the earliest investigators on the subject was the late Professor Tyndall, who showed that when a beam of light from a powerful electric arc lamp was passed through air apparently free from dust, the numberless reflections from the surfaces of the particles makes the air appear white and almost solid. Similar experiments made in air which had been allowed to remain quiescent for a long period failed to show such an appearance, and were taken as indicating that such air was dust-free; but more delicate methods of testing, which will directly be described, have shown that this is not entirely the case.

Professor Tyndall found that the electric beam failed to show the existence of dust in air which had been passed through a red-hot tube or through a flame, and he came to the conclusion that the dust was mainly of organic origin, and that its disappearance was due to its destruction by heat. There can, of course, be no doubt that such is partly the case, but it is probable that the inorganic particles which escape the action of the heat are too minute to be found by his test, and this is practically proved by the fact that the air

collected from a non-luminous gas-flame, in which the most perfect attainable combustion takes place, has since been found to contain more dust particles than that from any other source.

The method of testing by which our most recent knowledge has been obtained, is due to the genius of Mr. Aitkin, and is characterized not only by the most remarkable accuracy but by the greatest simplicity. It is well known that mists and fogs are produced by the condensation of moisture on minute dust particles, and it was known at least a century ago that a fog is produced by saturating air with moisture and then partially exhausting it under the receiver of an air pump. This exhaustion cools and also supersaturates the air, and the separated moisture, instead of appearing as dampness on the sides of the receiver, condenses on the dust particles as a fog or mist.

Under ordinary conditions a fog is produced, the individual particles of which are so small as to remain suspended for a considerable time; but when the number of dust particles is small, and the moisture is, therefore, deposited in larger amount on each individual, a kind of "Scotch mist" is formed, which settles as a fine rain on the bottom of the receiver. By counting the number of the rain drops which fall, the number of dust particles may be ascertained—in fact, this method of operating bears some resemblance to that of Hesse, already described.

Mr. Aitkin arranged a graduated plate of polished silver at a known distance from the top of the receiver, so that the number of drops falling upon a given area, as ascertained by means of a magnifier, would indicate the number of dust particles in the column of air above it.

As the particles are usually so numerous as to produce a true fog whose settlement in drops would take an indefinite time, it is usual to mix the air to be tested with a large proportion—often two hundred times its bulk—of air which has been freed from dust by filtration through cotton wool. By proper "dilution" with pure air a mist may be produced whose individual particles rapidly settle and are not too numerous to be counted.

In one series of experiments Mr. Aitkin found in the open air 2,119,000 particles per cubic inch in fine weather, and 521,000 after much rain. In air collected at random in a room where gas was burning, 30,318,000 particles were found, while in air drawn from near the ceiling, over 80,000,000 were found. Air collected from a non-luminous gas-flame, in which combustion is more perfect than in a luminous flame, contained no less than 489,000,000 particles per cubic inch! These cubic inches of such air may be said to contain roughly as many particles as there are inhabitants on the earth.

On the other hand, the air on Ben Nevis, the purest air examined, contained only an average of 113,000 particles, the maximum in the summer and autumn.

So far as the writer is aware, no analysis has been made of the particles deposited from the air in these tests, but an examination of the dust which formed the nuclei of snow crystals and deposited itself upon the surface of snow on the great St. Bernard (over 8,000 feet high) has shown the presence of silica and magnetic particles containing iron. This and other evidence points to the probability that atmospheric dust is largely of volcanic and meteoric origin, and when we remember the extraordinary effect which the Krakatoa eruption produced on the sunsets even at enormous distances, there appears to be considerable evidence in support of that view.—*Phar. Jour.*

STERILITY.

This patient brings to your notice a complaint for which your advice will be often sought in private practice. She is twenty-four years old, has been married four years, and has never been pregnant. The reason for this has been differently explained to her, she informs us, at the two hospitals at which she previously attended. There can, however, be little doubt, when we examine her, that the condition which is at fault is that which is one of the most common causes of congenital, as opposed to acquired, sterility. You find that the cervix is long and conical in shape; it appears to be just within the vaginal orifice, and there can be no doubt that this condition, which in this case is also accompanied by an equally important obstruction of the cervical canal, is the cause of her complaint. The condition is, of course, congenital, and is due to the abnormal development of the cervical part of the uterus to the detriment of the proper development of the body of the organ. It is most commonly associated with some thickening or constriction of the cervical canal, and in this instance, you observe that when I draw the cervix outside the vaginal orifice—as you see I can easily do by means of this blunt hook—it is impossible to pass through the cervical opening even the smallest metal sound. Indeed, you observe that I can only pass this ordinary probe through the cervix with some difficulty, and the stenosis of the canal which therefore exists is in itself a simple mechanical explanation, as I will hereafter point out to you, for the occurrence of the sterility. But, in this instance, now that the cervix is in view, you observe that the tissue is congested and granular—a condition which probably has been caused by the unfulfilled function of conception, and the consequently unsuccessful irritation to which the cervix has been exposed. Now we will allow the cervix to retract itself to its normal

position and introduce this duck-bill speculum to draw back the perineum. Then it becomes evident that the swollen elongated cervix occupies a considerable part of the vagina. The only treatment that will give this patient, or any woman suffering from a like condition, any prospect of cure is by adopting the common sense treatment and removing the mechanical obstruction to conception. The operation is one which requires care both in its execution and in subsequent treatment, but otherwise it is by no means difficult. Formerly it was usual to remove the cervix *en bloc* by the écraseur. And then you will understand the possibility of the accident which occasionally occurred—to the danger of the patient and to the considerable discredit of the operator. The wire was passed round the cervix as high up as possible, and as it was tightened up by the screw, it not only crushed through and separated the tissues which it constricted, but, as you will easily understand, it drew down the mucous membrane above it to a very considerable extent. The consequence was that sometimes when the tissue which had been severed by the wire came away, it was found that the peritoneal cavity had been opened either in front or behind by the dragging down of tissues into the loop. On the other hand, well-skilled operators who desired to avoid this danger and who, therefore, used the wire at a lower level on the cervix, when they had cut through the tissue, sometimes found that there was still left a considerable length of the elongated cervix. Again, in many of these cases the result of the crushing of the tissue by the wire caused subsequent sloughing and a condition resembling that of septicæmia. Or again, in some instances, a contraction of the tissues was caused which really repeated the previously existing condition, and the last state of that patient was sometimes even worse than the first. Finally, we have to remember hat we are, in these cases, not only dealing with an elongated cervix, but with a congenital contraction and obstruction in the cervical canal as well. So that it is not sufficient merely to remove the hypertrophied portion of the cervix, but we must also take measures to render more patent the canal which is left. I have, therefore, myself, for some years adopted what I believe to be a more rational and scientific method, and one, at any rate, which has proved to be, in its results, more uniformly successful than that which I have described. The patient, being under an anæsthetic and in the lithotomy position, the perineum is drawn well back by a duck-bill speculum, and the cervix fixed and drawn down by a double hook. Then, an ordinary sound having been passed to define the length of the cervical and uterine canal, and, therefore, the approximate position of the external os, the mucous membrane covering the cervix is cut circularly through with a sharp-pointed bistoury an inch below this level. The cervix at this denuded circle is grasped by catch forceps, and then, slightly below it, the cervix is removed by one or two cuts of broad-bladed scissors. Any arteries are caught up and tied. Then the sides of the cervical canal are slightly incised, and the edges of the mucous membrane are brought together with one or two stitches, so as to retract the lips. A glass stem is placed in the canal of the cervix, and the wound, as a rule, heals rapidly, and the stitches can be removed about the fourth day; there is no raw surface left for the absorption of septic material, and it is very rare, in my experience, for any rise of temperature to occur. The glass stem, after a few days, may be replaced by a galvanic wire stem, and the patentcy of the canal is maintained until convalescence is complete, when the patient is permitted to rise and follow her ordinary occupation. The results of this treatment are not only that recovery from the operation is rapid and complete, but in a considerable number of cases the sterility has been completely cured.

This patient illustrates, in a minor degree, the same cause of sterility, She has been married for six years, but has never been pregnant; the cervix is of normal length and size, but the os is markedly small, and, to the finger, feels the size of a pin's head. On inspection, you observe that it is impossible to insert, through the orifice, even this fine-pointed probe—the case, in fact, is one of extreme cervical stenosis. She suffers from the dysmenorrhœa which is almost invariably associated with this anatomical condition, and the mechanical reason for the sterility is as plain as in the previous case which we have just seen. The treatment, therefore, must be directed towards removing the obstruction. Formerly there were many who advised—and there are, even now, some who practise—the treatment of this condition by gradual or rapid dilation of the canal by the passage of metal sounds in graduated sizes. As a matter of practical fact, however, the results are most unsatisfactory, seeing that the contraction is a congenital condition and inevitably returns immediately the dilating sounds are removed. The common-sense treatment, therefore, is to remove the constriction altogether by widely incising the sides of the canal, and this is usually effected in some such manner as the following: The patient being under an anæsthetic and in the lithotomy position, the perineum is drawn back by a duck-billed speculum and the cervix drawn down and fixed by a double hook. Graduated sounds are then passed of increasing calibre until the canal is rendered sufficiently patulous to admit the blade of a strong pair of scissors, and then first one side of the cervix is cut through close up to the internal os, and then the other side is similarly incised. The method of treating the lips of the wound

varies according to the fancy of the operator; the object to be secured, of course, being the prevention of the healing process so that each lip shall separately glaze over and heal by granulation without effecting the union with the opposite side which would restore the original contraction of the canal. Sometimes this result is obtained with considerable difficulty, and many advocate the simple course of separating the lips by the examining finger once each day, so as to prevent the uniting together of the raw surfaces. The results of the treatment are often satisfactory, and the operation, properly performed and under ordinary antiseptic conditions, is a perfectly safe and harmless one. Occasionally indeed some hæmorrhage occurs, but this is easily controlled by plugs of cotton wool soaked in matico or some similar astringent.—Dr. Fenwick, in *Hosp. Gaz.*

CURETTING THE UTERUS IN CASES OF PUERPERAL SEPTICÆMIA.

Having been present during the very interesting discussion on the preventative treatment of "Puerperal Fever" (improperly so-called) at the last meeting of the British Medical Association (Obstetric branch) I was surprised that no allusion whatever was made to the treatment (by curetting with blunt wire) the cavity of the uterus in such cases. I am under the impression I was the first to suggest this treatment in the *Brit. Med. Jour.*, 1889, and my name appears in this connection in Neal's valuable "Digest" (section 1,595, third ed.) This suggestion, which I have on several occasions put into practice with satisfactory results, and which I still recommend in suitable cases, was commented on in a pamphlet published by Mr. E. Tennison Collins, Cardiff, viz., "Pathological Objections to Curetting the Uterus in Puerperal Fever," in which he condems this proceeding.

His arguments, however, are not convincing to me, as he evidently supposes I use an instrument so sharp as to produce a breach of surface, which I am most particular to avoid by using only a *blunt wire loop* which I can attach to irrigating tube if required. A French gynæcologist (M. Rapin, Lausanne) who has adopted this treatment says, *Med. Press and Cir.*, Aug. 28th, 1895; "Everyone admits the utility in cases of retention of practising curettage as soon as symptoms of endometritis set in (fever fœtid lochia) in order to relieve the womb of the tissues which would form a favorable field for the development of microbes. The curettage is superior to cauterization or intra-uterine injections."

I certainly consider that curetting *with blunt wire* (followed by drainage if necessary) much less dangerous than intra-uterine injections alone, and for this reason: that the micro-organisms which exist in these cases are found in far greater number near the outlet of vagina, and consequently would be much more likely to be carried upwards into the uterus by syringing than by the use of curette. I cannot, therefore, agree with the last sentence of Mr. Collin's pamphlet, "It is unjustifiable to curette the uterus in puerperal fever."

For my own part, I much prefer to have recourse to curetting rather than rely on the old treatment by drugs, which may be very useful in conjunction, but too often proves useless alone. I cannot help thinking that *the antiseptic treatment in midwifery would be seldom required if the aseptic were more attended to*, one of the most important plans being *thorough flushing of the entire genital tract directly after labor.*

M. Rapin states, "After each delivery there remains a more or less large quantity of tissue in the uterus destined to undergo fatty degeneration and mortification, this is the decidua vera, and furnishes the greater part of the materials constituting the lochia."

Is it not common sense, I ask, to remove by flushing this debris? and so get rid of the primary source of mischief, which if left later on (more especially by contact with a broken surface, such as a lacerated cervix or perineum) innoculates the patient and sets up puerperal septicæmia.

Those who have not taken the trouble on themselves to *thoroughly wash out the uterine cavity directly after labor* (the time it can be best and easiest accomplished) can have little idea of the amount of debris which, if left behind, must take a considerable time to be expelled, and is certainly likely (to say the least) to prove a source of danger to the lying-in patient.

In washing out the uterus I place patient on the back and use either syringe or douche, plain hot water 110° previously boiled (a little tinct. iodine may be added if preferred), and keep left hand over uterus while fluid enters the cavity. The cervical canal being patulous it offers no resistance to introduction of tube; plenty of room for return currents, comforting to patient, stimulating, cleansing, and hæmostatic; in fact, everything to recommend the proceeding, and nothing (that I know of) to forbid its general adoption in all cases of labor and miscarriage.—Alexander Duke, in *Med. Press.*

THE REFORM OF MEDICAL STUDY.—The various boards are just now deliberating on the reform of medical study. The present system is due to the late Professor Langer, who was medical adviser to the Ministry for the Home Department. According to these regulations a five years' course is necessary for obtaining a diploma, and during this time the student has to attend classes in anatomy

and physiology (one half-year each), medicine and surgery (four half-years), obstetrics and opthalmology (one half-year). With respect to the examinations, those in zoology, mineralogy, and botany may be passed at any time. After the close of the second year the student is admitted to the so-called first Rigorosum, consisting of practical examinations in anatomy and physiology, and theoretical examinations in anatomy, physiology, physics, and chemistry. The second and third examinations must not be passed before the close of the fifth year, after which time the student, on producing evidence of class attendance, is admitted to the final examinations. The second Rigorosum consists of a practical and a theoretical part, the former comprising the subjects of pathological anatomy and medicine, and the latter those of pathological anatomy, medicine, materia medica, and experimental pathology; there are also included two additional examiners in diseases of children and laryngology, who alternate. The third Rigorosum consists of practical and theoretical examinations in obstetrics, ophthalmology, and surgery, and a theoretical examination in forensic medicine. The lecturers on otology and syphilis alternate as additional examiners. After having passed these examinations, the Faculty grants to the student the degree of M.D. These regulations are obviously antiquated, their principal defect being that no attention is directed to matters of such great importance as public health and bacteriology, examinations in these subjects being open only to men who have already graduated and aspire to the position of a public official. It is now proposed that the examinations in zoology, mineralogy, and botany should be discontinued, but that a thorough knowledge of practical chemistry should be required, an innovation upon which much stress is laid by the boards, for chemistry daily produces new remedies (as many as 282 in the past year), and the practitioner ought to have an idea of their composition. The principal point, however, has reference to clinical instruction, because for a number of years complaints have been made of the imperfect practical knowledge of the students, an evil which is due to the spirit of centralisation prevalent in this country. According to this system, clinical teaching in medicine is limited to three clinics, and in surgery to two clinics. No wonder that the old amphitheatres of the General Hospital are overcrowded, and that a space hardly sufficient for 250 persons is occupied by 600 or 700. The boards, therefore, advocate that clinical instruction should be decentralised, that the chief physicians, extraordinary professors, and *docenten* should be allowed to read lectures, and that the students should have more frequent opportunities of seeing clinical cases. It is also recommended that slight operations should be entrusted to surgical students, a system which has already been adopted in the clinic of Professor Wölfler in Prague An examination in bacteriology ought also to be combined with that in pathological anatomy, and the study of syphilis should be obligatory.—*Vienna Correspondence, Lancet.*

Hysteric Simulation.—Dr. Mikuliez recently communicated to the Breslau Medical Society an interesting case of hysteric simulation in a woman of fifty-one years. After a slight trauma in 1891 she was seized with pain and vomiting of blood and later, with fæcal vomiting. These ceased but reappeared during the summer of 1892 in a more violent manner. The attending physician diagnosed a stricture high up in the rectum and applied gradual dilatation, with bougies. After transient improvement fæcal vomiting again set in and a trial explorative laparotomy was done but nothing abnormal was found in the intestine. As later there developed an abscess in the vicinity of the sacrum the coccyx was resected. This was followed by a free interval of several months. In the beginning of 1893 vomiting again appeared when a preternatural anus was formed, and though it funtionated well, the vomiting did not cease. Later, during the same year, she visited another physician, who amputated her right breast. The vomiting then left her. She came to Mikuliez to be freed from her intestinal fistula, to which the anus preternaturalis had dwindled. This was operated on, the intestine loosened from the abdominal wall and the gut sutured. Healing took place uneventfully, but all of a sudden she was taken with violent abdominal pains and fæcal vomiting, and she demanded that another preternatural anus be made. In the meantime there was a great misrelation between the vomiting and the necessary meteorism and peristalsis, while the good condition of her general nutrition contrasted with her frequent vomiting seizures—often twenty a day. In her vomit there were found scybalæ, such as would be formed in the large intestine, while the fæcal vomiting of obstruction is generally liquid. He, therefore, was no longer in doubt that she was hysterical and had her carefully watched, without result. As she was presented at a clinical lecture, she vomited up some fæcal lumps covered with mucus. A stomach-tube was immediately introduced, and the gastric contents found to consist of innocent, sour smelling and half-digested food, without the slightest trace of a fæculent odor, while that which she had just thrown up had a pronounced odor of fæces and a neutral reaction. The patient had undoubtedly extracted the fæces from the rectum, and secretly put them into her mouth. In this manner she had succeeded in deceiving physicians for years, and led them to do one capital operation after another.—*Hospitals-Tidende.*

Proprietary or Patent Medicines.—American medical, pharmaceutical and trade journals, usually keen to detect a hidden advertisement in communications recommending new drugs and preparations when the same emanate from home sources, throw caution and ordinary business sense to the winds when it comes to recommending and puffing the very same class of merchandise, bearing a foreign name and recommended by foreign authority. The success of one or two German chemicals, the products of synthesis, opened the doors for a flood of antiseptins, antifebrins, antipyrins, and other "antis" ending in "ol" or "in." They come to us covered all over with patents—patents covering the names, the process of manufacture, the ingredients (save those that are kept absolutely secret), the modes of dispensing, the package, the label—in short, everything that a patent can be made to cover. In a word, they are patent medicines in the very widest and strictest sense of the word; and yet they are received with enthusiastic welcome by press and practitioner, and are given, gratis and gladly, advertisements that money could not purchase for a home product, even though ten times more valuable and not one-tenth so much patented.

One of the proprietors of a drug of this sort recently established in America, on being approached by the solicitor of advertising for an American medical journal, answered very curtly that "*they didn't have to advertise their article. They got all the advertising they wanted for nothing, in the shape of laudatory communications in the reading matter of the medical journals.*" Which was true, every word of it, and that in spite of the fact that it was a patent medicine. *The very journal for which the agent was soliciting, and in the very copy which he carried as a specimen, contained no less than six laudatory notices of the drug in question—one of them a communication covering several pages and heralding its virtues in almost every known form of disease.*

Per contra, the same journal had enjoyed for years a handsome revenue from the advertisement of a reputable proprietary medicine house of this city, but had persistently refused to admit within its reading matter a little notice commendatory of one of its specialties, the formula for which was printed on every bottle.

It is useless to plead that these imported patents are so valuable that the profession must have them and must use them, secret nostrums though they be. This is not true, nor is it true that the manufacturers over there are any more honest and frank as to the nature and origin of their wares than are American manufacturers of similar drugs. In proof of this assertion we call the attention of our readers to Gwalowski's merciless exposure of a new compound which is getting ready in Germany to make a descent on Europe and America in the style of its predecessors—the antiseptic kreolin, of the wondrous value of which the advance guard of certificates have already commenced to appear in our journals. Will the latter be warned in time, or will they swindle themselves out of thousands of dollars by giving it the usual American welcome and gratis advertising?—*National Druggist.*

. . . The present so-called ethical views held by our medical men really constitute a barrier to our scientific progress. They continue to act against our American chemists, and in the meantime prescribe freely German patented articles, why should they object to prescribing a really meritorious article if discovered and patented by an American chemist?—*Pharmaceutical Era.*

Doctors' Wives and Professional Confidences. — A London journal lectures medical men on their "leakiness" as regards the personal affairs of their patients. The editor says (we quote from the *British Medical Journal*) that the great sinner is the country doctor. It is, however, adds the *Journal*, only a matter of size. "Let the victim be but big enough, and urbans can babble as incontinently as any pagan of them all." The *Journal* is ungallant enough to hint the error often begins by the doctor telling his wife. The partner of his bosom too often makes it a test of the loyalty of her husband, that he tells her everything. "It is an old saying that a secret can be kept by three men if two of them are dead, but a woman conceals—what she does not know. A wise man will make it a rule never to speak to his wife of professional matters, never even to tell her the names of those who consult him."

A man may be wise enough to make such a rule, but will he be strong enough to keep it? Experience seems to indicate that he will not. The doctor is human and feels the need of a confidant; the wife is very human and likes nothing so much as domestic details.

We must deplore the "leakiness" of which the profession is accused. It is wrong; but there are imperfections in our social fabric which must exist for a long time—until, for example, woman ceases to be curious and man—to be her slave.—Ed. *Med. Rec.*

An Easy and Ready Method of Circumcision. —John W. Ross, Surgeon, United States Navy (Retired), says in the *Medical Record.* Retract the foreskin; insert the glans penis up to the corona into the open mouth of a glass test tube; draw the foreskin well forward over the end of the tube; tie a strong, small silk cord very tightly around the foreskin immediately in front of the flange of the tube; amputate the foreskin one-eighth of an inch in front of the consticting cord by a circular

sweep of the knife; unite the mucous and cutaneous edge of the stump of the prepuce by eight or ten fine interrupted sutures; cut the constricting cord; remove the tube; cover the cut edges well with powdered iodoform; encircle the anterior half of the penis with a roller bandage of iodoform gauze, allowing the meatus to project slightly for facility of urination without soiling or removal of the dressing; and keep the patient in bed, with the penis elevated, for from twenty-four to forty-eight hours.—*Maryland Med. Jour.*

Urticaria.—Dr. Brocq *(Revue Internationale de Medicine et de Chirurgie Pratiques)* recommends, in the management of urticaria, the following measures:—

Apply locally the following salve:

℞—Carbolic acid,
Ess. peppermint, ... āā grs. xv.
Oxide zinc,
Lanolin, ... āā ℥ v.
Pure vaseline, ... ℥ ij.

At the same time, prescribe each day from two to six of the following pills:—

℞—Muriate quinine,
Ergotine, ... āā gr. iss.
Extr. belladonna, ... gr. $\frac{1}{6}$-$\frac{1}{8}$.

Before applying the ointment, one may apply locally a lotion with vinegar, cologne water or chloral as a base.—*Ex.*

In Bleeding Hæmorrhoids. — Complete rest in horizontal position. Bathe the region with cold boracic lotion. If the pain is acute, apply this ointment:—

℞—Cocain. hydrochlor., ... grs. iv.
Extr. belladonnæ, ... grs. x.
Extr. krameriæ, ... grs. xv.
Vaselini, ... ℥ij.

If the hæmorrhage is severe, apply a solution of perchloride of iron on cotton wool.

Reduce the hæmorrhoids with a sponge soaked in cold water. In the evening introduce this suppository:—

℞—Extr. belladonnæ, ... gr. $\frac{1}{4}$.
Extr. opii, ... gr. $\frac{1}{2}$.
Extr. krameriæ, ... grs. xv.
Cacao butter, ... ℥ j.

If the hæmorrhoids continue to cause annoyance, surgical intervention, either by forced dilatation of the sphincter, or by extirpation.—*Pract.*

Waterlogging from Anæsthetics. — "Dr. Joseph Price says that in his own work at present shock is simply unknown. What is sometimes called shock, is simply waterlogging with an anæsthetic." Commenting on this, the Denver *Med. Times* makes the rather surprising assertion that "men and women graduate from the best medical schools in the country and practise surgery, and yet never know how to give an anæsthetic. A great deal of fuss is made about histology, microscopy, etc., and yet a student may attend three years in any one of the best medical colleges in the United States, and never receive one hour's practical experience in the giving of ether or chloroform. Even the internes in the hospitals are not instructed; they are simply allowed to suffocate, overpower and fight their way as best they can.

"The fact is, the operator dare hardly to offer a suggestion, the anæsthetiser is so extremely sensitive. As long as this condition of affairs continues, there will be 'waterlogged patients dying from so-called shock.'"

And we add: There will be an immeasurable amount of suffering endured by the most innocent and interesting of our fellow-beings, merely because the great majority of their medical attendants have never learned practically how to employ anæsthetics in labor; and because this class of patients, and this alone, think it their duty to be martyrized!—*N. Y. Med. Times.*

"I must confess that I feel duty bound to say something good about your Wine of Cod Liver Oil with Peptonate of Iron. In all honesty I say that it is the best thing that I have used for the past 15 years, where cod liver oil is indicated. I have never been in favor of oil, although I have used it in emulsified form of different makes and have emulsified it myself, but never fully satisfactory. But in your above-named preparation I think I have found my ideal. In marasmus of a child I combined it with syrup of wild cherry. In lung trouble I combined it with syrup of wild cherry and syrup of tar."—Dr. Van den Berge, Grand Rapids, Mich.

A Remarkable Case of Incontinence of Urine in a Child.—Four months ago I treated a remarkable case of incontinence of urine in a child. It was seven months old, and had urinated from fifteen to twenty times every night since it was born, requiring its wrappers to be changed that often. I gave it one-third of a teaspoonful of Sanmetto four times a day, and before one bottle was used the babe was well, and it still remains so. In the last two years I have used several dozen bottles of Sanmetto in the treatment of various affections of the genito-urinary organs, and with the most gratifying results in every case. —E. S. Athearn, M.D., North English, Iowa.

Permanganate Stains. — The stains produced by a permanganate solution are removed by a twenty-per-cent. solution of soda-bisulphide.

THE CANADA LANCET

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* DR. J. L. DAVISON, 12 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Letters and Remittances to be addressed to* ARTHUR A. ADAMS, Gen. Business Manager, 11 Colborne Street, Toronto.

TORONTO, NOVEMBER, 1895.

MATRICULATION IN MEDICINE IN ONTARIO.

There is a good deal of heart-burning among intending students of medicine who had not registered with the Medical Council previous to the last meeting of that body in June. We have been made acquainted with a goodly number of cases which seem downright hardships to gentlemen wishing to register, and who have been denied that privilege by Dr. Pyne, of course under instructions from the Council. The fact seems to be that a *specific certificate* is required; that equivalents are totally ignored, and that no matter how well a man may be educated, nor what proof he may present of a good training, evidenced by his having passed certain examinations, he cannot enter the sacred fold of the active medical profession without presenting to the registrar one, and one only, specific Departmental certificate. The single exception made is in favor of graduates in arts, who are entitled to register by statute.

This arrangement seems grievous to many well educated young men who, though not possessing the specific certificate from Educational Department, are, and have evidence to show that they are, equally well mentally equipped with those who do possess it.

Our standard is now high, higher even than that demanded by the General Medical Council of the United Kingdom. In their last printed regulations, *British Medical Journal*, No. 1810, pp. 577, *et seq.*, are set forth the various examinations which entitle a student to register before the British body.

It will no doubt surprise our readers to learn that there are no less than EIGHTY-SEVEN examinations, held in all parts of the civilized world, which are accepted in Britain*, as entitling a student to register in medicine; while in old, wealthy, cultured Ontario, the poor student must indeed present one of two certificates, viz., a B.A. degree, or that awful one — the Departmental.

The question of registration is of so vital importance to medical education in Ontario, that a short *résumé* of how matters stand, and have stood, should be of interest to our readers. Here it is boiled down to its practical, working, everyday basis.

We had years ago as the requisite for registration, the Third class certificate with Latin.

Next, Second class with Latin. Next, Departmental Arts; which was a gradual, but well-marked increase in difficulty.

When this last was adopted, students who had the first qualification were received up to a certain date.

Up to the present year, all students who have taken their Second class without Latin, have been allowed to register on presenting a certificate showing they had passed the Latin, and no Second class man was ever refused if he took the Departmental Latin.

Again, so recently as in June last, a large number of students who had taken the Departmental examination and failed in a few branches, say, one, two, or three, at the July examination,

*REGULATIONS OF THE GENERAL MEDICAL COUNCIL OF THE UNITED KINGDOM, 1895.

The Preliminary Examinations in General Education required to be passed previous to Registration as a Medical Student, shall be as follows:—(*a*) English Language including Grammar and Composition. (*b*) Latin, including Grammar, Translation from specified authors, Translation of easy passages not taken from such authors. (*c*) Mathematics, comprising (*a*) Arithmetic; (*b*) Algebra, as far as Simple Equations, inclusive: (*c*) Geometry, the subject matter of Euclid, Books I., II., and III., with easy deductions. (*d*) One of the following optional subjects:—(*a*) Greek, (1) French, (2) German, (3) Italian, (4) any other Modern Language, (5) Logic.

A Certificate of having passed a University Examination required for Graduation in Arts, or a Senior or Higher Local University Examination, or a Senior Grade Examination of the Intermediate Education Board of Ireland, or the Leaving Certificate Examination (Honours and Higher Grade) of the Scottish Education Department wherein the specified subjects of General Education are included, may be recognized for the purpose of registration.

petitioned the Council to be allowed, as heretofore, to complete their examination in the following July; this was refused in every case, and the privilege of being registered on producing evidence of having passed all the branches required by the Council was now denied them for the first time, and without any notice having been given of this change of policy. None of them could possibly have the certificate of the Department, which up to the present year is only issued to students making a complete pass, hus virtually excluding them all. A small measure of relief has since, happily, been given by the Department.

Since the last meeting of the Council in June, the Registrar has been given strict orders to admit no one to registration who does not present the official certificate of the Department and *that only*, with the exception, as before stated, of graduates in Arts, who have the right under statute.

We also note, that the privilege heretofore enjoyed by holders of second-class certificates, which, by the way, is a much higher examination than many which would entitle to registration in Britain, of presenting themselves for the Departmental Latin, the Council has cut off without an hour's warning. Furthermore, the privilege heretofore uniformly allowed, and still allowed in all university examinations of which we have cognizance, to students taking the Departmental examination, and who partially failed, but who completed the examination the following July, of registering, as we have stated above, was denied them, until the Department gave the slight relief just mentioned; also without any warning, on the ground stated, that they have not presented the special certificate before spoken of, and which no one under the circumstances could possibly obtain.

Again, students who have finished their second year in Arts, and some indeed within a few months of taking their B.A. degree, have been refused registration as before, on the sole ground of their not possessing the specific certificate.

These men have evidently done more than is required for the specific examination. The refusal to register them is therefore an anomaly, to say the least of it. Equivalents seem to be entirely ignored in the present registration regulations of our Council, a matter of grave importance to the country and profession, and certainly of great hardship to young gentlemen wishing to enter medicine in their own province; and no warning whatever has been given of the sudden stringency in the regulations which has been sprung upon them.

In our next issue we shall give specific cases of what appears to us grievances to intending students of medicine. Space will not permit us to do so in this number.

LODGE PRACTICE.

Among the many ills that the medical profession has to contend against, one of the worst is lodge practice; where the physician contracts for a sum, not usually more than one dollar a year for each member, to treat all members of the lodge or club, no matter how long he may be ill or how many visits may be necessary.

The theory is that the physician gets the *entrêe* into family practice in this manner, and that makes up for any loss he may sustain in treating the male members of the lodge. The practical fact is, that he only succeeds in cheapening the value of his services, to find that should any illness overtake the wife or children, his brother members will call in the services of some other doctor. This is true in a great many cases, and there can be no doubt that nearly one million dollars is lost to the profession in Ontario on account of lodge practice each year.

We also find that the women and children are forming lodges, for social purposes ostensibly, but for the real purpose of getting medical services, practically gratis.

If medical men cannot get practice without lowering the standing of the profession they should leave for some mercantile pursuit. It is a common saying that doctors are poor business men, and lodge work shows it, for from a business standpoint they are cutting their own throats, benefiting only a lot of working men, and others who on an average make as good incomes as their doctor.

Where do you find any other class of men eager to give their services for nothing? Do lawyers, clergymen, plumbers, or mechanics do so? Cer-

tainly not. Why then should our profession be the only one so blind, and unbusinesslike as to degrade themselves, and lose money by so doing? The members of the profession in London, Ont., have made an attempt to put a stop to the contract practice and every man in that city with the exception of six or seven has signed an agreement to do no more lodge practice after the expiration of the year, under a penalty of $60 for each offence, provided every physician in the city signs the document. A similar effort is being made in Toronto, and will take effect, provided 95% of the physicians will sign. Many are afraid that men will be brought in to take up the work, but the ostracism which will be theirs, should deter any self-respecting men from entering into injurious competition with their professional brethren.

If there was a great *esprit de corps* among medical men this question could easily be settled, but it is an unfortunate fact that there is scarcely any cohesion among the doctors; keen competition and a lowered status of the profession render it difficult to solve any questions relating to the general welfare of the faculty.

LOUIS PASTEUR.

By the death of M. Louis Pasteur, Sept. 27th, the scientific world suffers a loss, not irreparable, but great. The medical world owes, perhaps more to him than to any man who ever lived. He was not a physician, but was educated as a chemist and spent the earlier portion of his life in that field of work. As every one knows, the later years of his valuable life have been devoted to pathology. He was the father of bacteriology.

It was Pasteur who first conclusively proved that fermentation and putrefaction were impossible, except in the presence of living germs; and that the microbes found in certain organic liquids, after exposure to the air, were in every instance derived from living organisms, thus giving final quietus to the old doctrine of spontaneous generation, and preparing the way for Lister's introduction of antisepsis and asepsis into surgery.

His greatest practical discoveries were, a method to prevent the grape vine pest, and inoculation against rabies. Every one knows the vast importance attributed to germs in the ætiology of disease. To Pasteur, through his investigations in anthrax his discovery of the possibility of immunizing animals to that disease and others equally virulent, may be given the credit of laying the foundation of the great recent developments in prophylaxis. The idea of serum therapy may justly be accredited to him.

Born in 1822, his early life was one of severe struggle, but his indomitable will and his real love of science earned for him in turn, every distinction that the French Government could give him. By a decree of Napoleon III,, not promulgated, he was made a Senator, and in 1885 became a member of the Legion of Honor, in which he was steadily promoted to the highest rank.

TORONTO CLINICAL SOCIETY.

The opening meeting of the Toronto Clinical Society, for the season, was held in St. George's Hall, Elm St., Oct. 9th. President Dr. J. E. Graham in the chair, Dr. J. N. E. Brown acting as secretary.

After the opening business Dr. Graham delivered the inaugural address. He referred to the great importance of clinical study, which he maintained should not be neglected, notwithstanding the demands made by pathology and bacteriology. The essayist then reviewed the study of medicine during the past century. There were three eras, that of the clinician, represented by Bright, Addison and Laennec; that of the morbid anatomist, represented by Rokitansky and Virchow, preeminently; and that of the bacteriologist, to which the late Pasteur and Koch belonged. During the past ten years he said the attention of medical men was directed to the importance of clinical study; in this they were wonderfully aided by instruments of precision which were unknown to observers before. He attached great importance to the examination of body fluids. The subject of the great strides in the matter of scientific treatment was touched upon and bright prospects pointed out as possible in the near future.

Dr. A. A. Macdonald gave the report of a case in practice. The patient was a man aged fifty in whom the most prominent symptoms were: A history of strain, the appearance of a tumor in the

region of the pylorus, the occurrence of vomiting and diarrhœa, followed by ascites. He did not suspect aneurism. Dr. Baines, to whom the case was referred, said that he considered it a case possibly of cirrhosis of the liver, although few of the classical signs of such were present. To relieve the patient he aspirated the peritoneal cavity twice. Œdema of the glottis was the immediate cause of death.

Dr. H. B. Anderson gave the *post mortem* report. An aneurism about the size of a goose egg was found at the origin of the superior mesenteric artery, which vessel was completely occluded. The aorta was almost filled with organized laminated clots. The tumor had shoved the head of the pancreas up into the portal fissure and blocked the portal circulation. He then described how the collateral circulation was established. There were atheromatous changes in the arterial system, interstitial sclerosis of the kidneys, congestion of the liver and spleen, an emphysematous condition of the lungs and a very much hypertrophied heart

Drs. MacFarlane, Grasett, Graham and Cook discussed the paper. Dr. D. Campbell Meyers gave an interesting description of a visit to Lourdes.

Dr. G. A. Bingham related the history of a very severe case of menorrhagia which had lasted fifteen years and reduced the patient to a most exhausted condition. Currettage, tamponage, electricity and all the ordinary means recommended for such cases had been tried. She finally consented to the radical operation of ovariotomy, which he performed. All symptoms disappeared, a complete recovery ensuing. One of the ovaries showed a cystic condition.

Drs. Baines and MacDonald discussed the value of electricity in these cases.

TRINITY MEDICAL SOCIETY.

On Tuesday evening, 22nd October, the first meeting of the Medical Society for the session of 1895-6, was held in the College building, Spruce Street. The meeting was opened with an eloquent address from the President for the ensuing year, in which he ably put forth the objects and aims of the Society, exhorting each member to do all in his power for its advancement and welfare. He also spoke in glowing terms of the work done by the Society in its past and inaugural year. Following was a symposium on Typhoid, which was taken up under the following heads:—The ætiology, by Mr. McRae; pathology, by Mr. Clare; diagnosis, by Mr. V. A. Hart, and the treatment, by Dr. A. C. Lambert, of the Toronto General Hospital Resident Staff. These interesting papers were greatly enjoyed by the large assemblage of members present, and evoked considerable discussion, in which the following gentlemen took part: Drs. Rose, and Shuttleworth; Messrs. Oliver, Taylor, Nyblett and McRae. The reading and passing of the Constitution of the Society brought to a close a very instructive and enjoyable evening. The officers for the ensuing year are: Hon. President, Dr. H. B. Anderson; President, Mr. J. H. Allin; Vice-President, Mr. J. Donald; and Secretary and Treasurer, Dr. H. S. Roberts. Committee, Messrs. Shoemaker and Stanton; representative fromthe General Hospital Resident Staff, Dr. J. G Lamont.

Morning Diarrhœa:—This distressing complaint must have been so often troublesome to our readers that we append the methods of treatment of Dr. Delafield, *Med. Rec.* If the disease occurs in women, before beginning any medical treatment, it is important to have cured any lacerations of the perineum or the cervix, displacements of the uterus, or disease of the Fallopian tubes which may exist. The methods of treatment which are ordinarily employed are:

1. *Change of Climate.*—The effects of this are often very satisfactory and in the milder cases very prompt. A person who has a morning diarrhœa for months may leave New York in the after noon and the next morning begin to have formed passages. Unfortunately, a return to the city may be followed by a return of the diarrhœa. In the more severe cases a prolonged residence in a dry inland climate may effect a cure.

2. *Diet.*—The plans of diet usually followed are: (*a*) an exclusive diet of milk; (*b*) an exclusive diet of beef and hot water; (*c*) a diet composed of milk and meat alone; (*d*) a diet from which only the sugar and starches are excluded.

As regards the effects of treatment by diet, we

find that some patients are cured, some are benefited for a time, in some there is no effect at all, some get worse.

3. In a small number of cases the diarrhœa can be cured by daily lavage of the stomach.

4. *Drugs.*—As a rule, the number of the passages can be checked for a moderate length of time by the preparation of opium. The improvement only lasts while the opium is taken, and it is evident that the use of this drug ought not to be continued for any length of time. The subnitrate of bismuth, the subgallate of bismuth, and B-naphtol bismuth are said to give good results. The writer has not been very fortunate with them. Salol and naphtalin answers well in some cases, but have absolutely no effect in others. Arsenic, quinine, ipecac, belladonna, and cannabis are all very useful drugs. The drug which has given him the best results is castor oil, in doses from 5 to 10 drops.

Treatment of Diabetes.—Robin (*Bulletin de l' Académie de Médecin; Univ. Med. Mag.*) employs what he terms an "alternating treatment" in diabetes. He believes that in this disease there is an increased activity of the chemical changes of general nutrition, and of the hepatic cells in particular, which is the result of increased activity of the nervous system. Hence he recommends drugs which diminish the activity of these general changes by acting primarily on the nervous system. The treatment is divided into three stages: (1) For four days a powder, containing about fifteen grains of antipyrin and eight grains of sodium bicarbonate, is given twice a day. In addition cod-liver oil is taken twice a day, and Seignette salt as a morning purgative. (2) At the end of four or five days the antipyrin is discontinued, sulphate of quinine prescribed,—six grains in a cachet at the mid-day meal. This is taken for six days, then discontinued for four days, and afterwards taken again for six days. Before the morning and evening meals a cachet is recommended containing arseniate of soda, carbonate of lithium, and codeia. (3) After fifteen days these drugs are discontinued, and the author prescribes, for ten days, a pill containing opium, belladonna, and valerian. The cod-liver oil is discontinued and the patient is allowed to drink a weak solution of bicarbonate of soda (1 in 125). In the case of nervous women, or if there should be intolerance of the opium and belladonna pills, fifteen grains of potassium bromide are given two or three times a day for eight days. In addition to the medical treatment the diet is regulated. On account of the loss of inorganic salts in diabetes the author recommends the food to be well salted; to supply potassium salts he advises green vegetables, especially cabbage and endive, and also a weak solution of potassium tartrate to dilute the wine taken at meals; and to counteract the loss of phosphates of magnesium and calcium he prescribes glycerophosphates of lime and magnesia. He also recommends bouillon on account of the inorganic salts which it contains. If sugar is still present in the urine after the third stage of the medical treatment above mentioned the course is recommenced. After a second course, whether sugar has disappeared or not, the drugs are discontinued for one month. Robin has treated by this alternating method 100 cases of diabetes, in each of which the daily quantity of sugar excreted was 100 grammes or more. In twenty-four of these recovery has occurred; in twenty-five recovery is still doubtful; in thirty-three there has been considerable and permanent improvement; in eighteen the results have been negative.

Dr. Roswell Park in his speech before the recent meeting of Harvard Alumni Association, opened out in this way: A few weeks ago I attended a convention in one of the Canadian universities; and although I sat within ten feet of the chancellor on the stage, I was unable to hear anything that he said. They had that good old English custom of making a noise, and the students at the other end of the hall made such a commotion that it was impossible to hear anything that was said on the stage. Of course, you are aware of the Oxford and Cambridge customs, and it seems that they are still imitated on this side of the water. They also had a dinner afterwards, and I was asked to say something. In fact, our Canadian friends have a habit of calling to his feet every man who is still able to get there after a dinner. And I took occasion to allude, as gently and pleasantly as I could, to the commotion which I had witnessed and the scenes that had come under my observation; and I thought I would try them with a little anecdote about a

friend of mine, as I put it, who was making a Fourth of July speech in this country. During the progress of it he was annoyed a great many times by a man who persisted in asking him questions or making remarks, and the gentlemen finally called him down something after this fashion : He stopped abruptely in the midst of his speech, and said, "My friend, I want to speak to you. Are you a Christian ?"—"Yes, sir."—"And do you go to church regularly !"—"I do." said he, And do you believe in the efficacy of prayer ?"—"I do ; I say my prayers every night."—"Good. Do you believe in the doctrine of regeneration ?"—"I do ; I believe in it literally." He said, "Better yet. Now, my friend, I want to give you a piece of advice ; when you go home to-night and retire to the privacy of your bedroom, get down on your knees and pray very earnestly and faithfully, pray as you never prayed before that you may be born again, and still-born." Now, they saw it, if they were English.

Massage in Sprains, Bruises and Dislocations. —We have for some years looked upon absolute rest —as nearly absolute as possible —as being the best treatment for dislocations and sprains. Common sense points that way ; much experience points that way ; a knowledge of the process involved in the recovery of the damage points that way ; and yet we see from time to time good authorities taking the opposite view as, for instance, Dr. Graham of Boston, who in the *Ed. Med. Jour.* states his belief in massage. He says that in beginning the rubbing, in a recent case, the injured parts should be approached gradually, after first rubbing at some distance on the healthy tissues. The first step consists of gentle stroking or effleurage. The second step consists in kneading the part. At the end of fifteen or twenty minutes' rubbing, gentle, firm pressure can be made over the swollen and recently tender parts, when the rubbing may be given a circular motion, with the greatest push upward. If this be done with sufficient tact, it will probably be agreeable to the patient rather than painful. At the conclusion of the rubbing a well-fitting bandage is applied. This should be repeated twice daily. It is claimed that such injuries treated in this way get well in one-third of the time that similiar cases do under the usual method of rest and fixation, and with less tendency to subsequent weakness, pain and stiffness. The author says, "Experience teaches that the sooner after a sprain massage is begun the quicker is the recovery."

Strychnine in Nervous Cough.—Dr. L. Lichtwitz *Sem. Med ; Med. and Surg. Rep.*, according to author, the best reatment of nervous cough of central origin (in choreic, tabetic and hysteric patients)—which differs from ordinary cough by the nearly complete absence of expectoration and by habitually disappearing at night—consists in the administration of strychnine in large doses. He begins with 6 milligrammes of strychnine sulphate per day, increasing by 1 milligramme every second day, until a daily dose of 8 to 9 milligrammes has been reached. The medication is suspended at the end of two weeks, to be resumed a week later. If no result is obtained after the second week of treatment, Dr. L. resorts to electricty, massage, or hydrotherapy ; or prescribes a change of climate (sojourn in the mountains.)

A Treatment for Acne of the Face.—In an abstract from the *Bul. Gen. Therap.*, which appears in *Lyon Med.*, the writer gives the following formula, which, he says, has often been employed at St. Louis with success : Fresh lard, 750 grains ; betanaphthol and styrax ointment, each, 30 grains. Application of this mixture should be made by strong friction every night for a week, then interrupted for six days, when they may be repeated if necessary, although it is often useless to do so. It there is an appearance of small acute clusters, which generally show themselves toward the second day, the acne is ordinarily cured or very much ameliorated at the end of a week.

The Lay Press as Advertising Mediums.—From a sister city we have received a newspaper containing details as to the *raison d'être* of a wonderful (*sic*) operation performed by a surgeon of that city. The paragraph is rendered more conspicuous by a woodcut representing a beautiful young lady in bed. This is awful, and we hope the surgeon has ere this publicly set forth how his name happens to appear in such wise. We note that his assistants were not of the city where the operation was performed, but of a neighboring

village, a fact which may be perfectly easy of explanation, or may be significant.

COMMENCEMENT DAYS. — Letters of father to son. *Nat. Med. Rev.* No. 1. "*My Dear Son,*—I am so glad to learn that you are starting in your noble profession with the idea that there is something higher and grander than the simple procuring of a livelihood. I am glad to see that you appreciate the opportunity which opens before you for doing good, without thought of the sordid gold which so often defiles those who handle it. Let this be your motto: 'He went about doing good.'"

No. 2. (One year later.) "*My Dear Son,*—You cannot expect me to give you a thorough education and then supply you with means afterward. You should now be able to earn your living, it seems to me. Have you tried hard to collect some of your bills? 'I will not see you suffer, you know, but do not let the people get the idea you are going to do their work for nothing. Enclosed you will find a portion of what you request. 'The laborer is worthy of his hire.'"

SALICYLIC ACID OINTMENT. — Bourget recommends its use for gonorrhœal and other forms of articular rheumatism, *Therap. Gaz.*:—

℞— Acidi salicylici, Lanolin, Olei terebinth., ... āā ʒ ijss.
Adipis, ... ʒ iij.

It is reported of this application that the acid is so thoroughly absorbed that it is afterwards found in the urine in large quantities, also that local and general effects are most satisfactory.

A TEST FOR INCIPIENT DIABETES. — Professor V. Noorden says, *Med. Rec.*, he has discovered a new means of diagnosing diabetes in its very earliest stage, or even a hereditary tendency thereto. He gives the patient 100 grains of grape sugar, which in the normal subject has no effect, but in the incipient diabetic produces glycosuria. If this prove correct, it will be most useful in gaining for the diabetic the earliest treatment.

PERSONAL.—On September 25th, at the residence of Mrs. A. Frazer, Shakespeare, Ont., her daughter, Miss Jean Frazer, was united in marriage to Dr. S. J. Rutherford, of Listowel (Tor. '89). Miss Watson, of Toronto, a college friend of the bride, performed the services of bridesmaid, while the groom was supported by his old college chum, Dr. J. L. Turnbull, of Clinton, Ont. The newly wedded couple left in the evening for an extended trip *via* Buffalo, Albany, down the Hudson to New York, and other eastern points.

AN OLD FRIEND IN A NEW GUISE.—The New York Pharmacal Association is now putting up LACTOPEPTINE IN TABLET FORM, which will, no doubt, give a fresh impetus to the sale of this favorite agent. Every tablet has N. Y. P. A. stamped upon it, and weighs exactly five grains. It will be necessary, therefore, in prescribing Lactopeptine in future, to specify "Powder," or "Tablets."

THE QUININE TREE.—It is said, *Lancet-Clinic*, that the famous tree from the bark of which quinine is obtained furnishes no quinine except in malarial regions. If a tree is planted in a malarial district it will produce quinine; if it is planted in a non-malarial district it will not produce quinine. It is therefore claimed that quinine is a malarial poison, drawn from the soil and stored up by this wonderful tree.

SEAT WORMS—Will generally be removed by giving 3 to 6 or 10 drops of turpentine on a little sugar three times daily for two or three days, *Med. Sum.*, then follow with a full dose of castor oil and an enema of salt and water just before it operates.

LINES

TO A DELINQUENT SUBSCRIBER.

If I should die to-night—
And you should come to my old corpse and say,
Weeping and heart-sick, o'er my lifeless clay,
If I should die to night—
And you should come in deepest grief and woe,
And say, "Here's that two dollars that I owe,"
I might rise up in my great white cravat,
And say, "What's that!"

If I should die to-night—
And you should come to my old corpse and kneel,
Clasping my bier to show the grief you feel—
I say, if I should die to-night,
And you should hear, and there and then should come
And even *hint* about paying me that sum,
I might rise, galvanized—and then drop dead and dumb.

—*Ex.*

Books and Pamphlets.

PHYSIOLOGICAL FACTORS OF THE NEUROSES OF CHILDHOOD. By B K. Rachford, M.D., Professor of Physiology, and Clinician to Children's Clinic, Medical College of Ohio. 12mo., 130 pp. Cloth, net, $1. Cincinnati: The Robert Clarke Co. Toronto: Carveth & Co.

This little book is for the most part a republication of a series of papers which appeared in the *Archives of Pedriatics*. The August number of the *Archives*, in which the last of this series appeared, contained a four-page editorial on these papers, of which the following is the opening paragraph:

"The chapter which appears in the present issue of the *Archives* brings to a close the admirable series of papers by Dr. Rachford, on 'Certain Physiological Factors of the Neuroses of Childhood.' The series has been one of great interest, and has presented the result of much original research."

In their republication in book form these papers have been revised and many additions have been made. The chapter on Auto-intoxication has been entirely re-written, so as to include the extensive research work of the author on this subject. The book is an etiological study of a group of diseases which are the most common of childhood. It stands alone in the field it attempts to occupy.

PATHOLOGY AND TREATMENT OF DISEASES OF THE SKIN, for Practitioners and Students. By Dr. Moriz Kuposi, Professor of Dermatology and Syphilis, and Chief of the Clinic and Division for Skin Diseases in the Vienna University. With eighty-four illustrations. Translation of the last German edition, under the supervision of James C. Johnston, M.D. New York: William Wood & Co. Toronto: Carveth & Co. 1895.

The name of the author is a sufficient guarantee of the excellence of the work in the original. The translator has made an extremely interesting and lucid work in English out of it.

It is in the form of lectures, which contain the views of Hebra, modified as far as has become necessary by the advancement of modern science, amplified by the original researches of the author and presented to the reader in a most concise and attractive form. To all English-speaking physicians and especially to those who read only their own language, this excellent translation of a great and practical work opens up a mine of surpassing wealth.

Students will find it invaluable as a book of reference.

A TREATISE ON THE NERVOUS DISEASES OF CHILDREN, for Physicians and Students. By B. Sachs, M.D., Professor of Mental and Nervous Diseases in the New York Polyclinic; Consulting Neurologist to the Mt. Sinai Hospital; Neurologist to the Montefiore Home for Chronic Invalids; Ex-President of the American Neurological Association. One volume, 688 pp., 8vo., illustrated by 169 engravings in black and color, and a colored plate. Muslin, $5.00. New York: William Wood & Co. Toronto: Carveth & Co. 1895.

The author has chosen a very fertile, and to a great extent virgin, field for his work. To speak candidly we would not, before the appearance of the present volume, have believed it possible to produce such a work on the nervous diseases of children alone. There was room for such a book, as the physician often feels a need of wider information regarding these diseases than is found in text-books on pedriatics.

The work includes all those diseases which either occur frequently in early life, or which, when occurring at the period, have some distinctive features.

The introductory chapter on methods of examination, including examination schemes, cranial measurements, Preyer's observations, visual tests, action of muscles, sensory distribution, gait, reflexes and electrical examination, is one which is worth the price of the whole book to any practitioner — not a specialist, who will take the trouble to assimilate it.

It reduces the examination of a child, often so very unsatisfactory, to as nearly a scientific basis, as can be done with our present knowledge and methods.

While the reader is referred to the larger text-books on nervous diseases for detailed descriptions, yet the author has considered it expedient to give a short, but sufficient, account of the anatomy, physiology, and pathology of the chief divisions of the nervous system, a feature which will be found very useful.

Functional diseases such as convulsions, epilepsy, hysteria, chorea, headaches, disorders of sleep, etc., are first discussed; then the organic diseases of the nervous system are taken in the sequence indicated by their natural relationship.

It is a practical and useful book and should find a place in the library of every physician who has to do with children. The illustrations, for the most part original, are excellent, as is also the letter-press and binding.

THE CANADA LANCET,

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

The LANCET has the Largest Circulation of any Medical Journal in Canada.

TORONTO, NOVEMBER, 1895.

Original Communications.

DRIFTING, WHO, HOW, WHITHER?*

BY LEARTUS CONNOR, A.M., M.D., DETROIT, MICHIGAN.

The study of Medical Sociology exhibits a drifting in the matter of consultations. Rightly considered, the medical consultation is the "holy of holies" of associated work. He only can enter it aright, who, in the words of the Great Teacher, "hath clean hands and a pure heart; who hath not lifted up his soul unto vanity, nor sworn deceitfully."

Its history shows that the medical profession has ever taken the greatest interest in the qualifications of those seeking its fellowship. Not all calling themselves "doctors" have been admitted within its fold and many have been ejected therefrom, who have entered by ways other than the strait gate.

Because of its jealousy of the proper character of its membership, the laity have termed the profession intolerant, bigoted, and narrow—so little has the world ever comprehended the sacred trust assumed by the physician.

The medical profession holds as sacred all knowledge acquired in the performance of its duties; it suffers in silence that the sick may recover health; it endures misrepresentation and obloquy because its nature and purpose are exalted above popular comprehension; it must be clean in thought, pure in life, and unselfish in work, if it would most effectually accomplish its purpose. Hence the necessity of ever keeping its ranks free from those lacking these qualities.

Differing standards of admission to the medical profession have prevailed in succeeding ages, different countries, peoples, and civilizations; but each has had some standard, for both admitting and expelling members. No physician was ever burned at the stake by the medical profession, for holding diverse views on matters of medical theory or practice, but many have been ostracised and regarded with contempt.

The standards of professional association are partially written, but more generally unwritten. Our written standard was adopted in 1847, but our unwritten one traces its origin to the first medical man, being inherent in the nature of the medical profession—a part of the medical training. The son absorbed from his father, or the student from his preceptor, medical knowledge, morals, and etiquette, and transmitted the same to his sons or students. Thus, from hand to hand, mouth to ear, hand to eye, the real standard by which we accept or reject professional fellowship, has come to us as a direct personal testament from generations far antedating the earliest historic record.

The Roman Catholic Church regards the medical profession as *the* profession, all else but fragments, and in this respect it concurs with the estimate of itself by the profession. It is a gigantic tree whose germ sprouted when human beings first needed relief from suffering, whose leaves have been for the healing of the nations, and under whose sheltering boughs the worn and distressed are protected from the scorching heat of life's physical diseases. The question before us is, what shall be the relations of the medical profession to the "sects" and "isms" as homœopathy, eclecticism, etc.? The code of ethics adopted by the American Medical Profession in 1847 makes the specific statement: that all professional association with members of these sects is derogatory to the medical profession. To "aid or abet" in the education of the believers in these sectarian views is also regarded with similar disfavor. For now, many years, some have doubted whether ostracism was the wisest method of dealing with these sects. The number of doubters has, from year to year, so multiplied, that the student of medical sociology notes the change with increasing interest. He is led to inquire whether this drifting, starting in city and country, upon the mountains and in the valleys

* A paper read before the American Academy of Medicine, at Baltimore.

from thousands of active centres scattered throughout the entire land, will finally lead the profession, unitedly, to accept some method of dealing with the medical sects, creditable to all and promotive of the best interests of the profession and humanity; or cause it to return to the primeval principle of an honorable fellowship, thoroughly trained in medical science and art.

Of this drifting, we briefly note a few illustrations.

First, in the matter of medical education.

When all medical colleges were manned by regulars, homœopaths and other sectarians obtained their scholastic education at these schools. Later, the sectarians were able to educate their students in their own colleges, hospitals, and dispensaries. When medical departments were established in State universities, the sectarians sought a position in the same, that they might teach their peculiar views. Notable among the institutions where this end was sought, is Michigan University. Shortly after its foundation, the homœopaths induced the State Legislature to instruct the board of regents to place in the regular faculty a professor of Homœopathic Materia Medica and Practice of Medicine. For many years the regents refused to accede to this instruction, nor did they yield until it became an alternative of a sectarian professor or no university appropriation from the legislature. At this juncture, the Michigan State Medical Society arose against the alliance and protested with such force, as to cause the authorities to pause. The matter was at last carried to the American Medical Association, and settled by the passing of a resolution to the effect that it was as derogatory to educate sectarians as it was to consult with the same after they were educated. The regents now set up a distinct homœopathic college (on paper). The phrase on paper is used because the homœopathic students still continue to be taught by regular teachers in the following subjects, viz., chemistry, physiology, anatomy, bacteriology, hygiene, physiological chemistry, physics, pathology, histology, etc. That the regular professors should not be compelled to sign the diplomas of sectarians, a new scheme of issuing University diplomas was adopted, by which no professors' names appeared thereupon, but only those of the president and secretary. It will thus be seen that, in spite of the resolution of the American Medical Association, the regular faculty have been, and are constantly engaged, in educating those whom they know to be sectarians in medicine. As this arrangement is universally acquiesced in by the profession, it is clear that in the matter of educating sectarians, there has been a great drifting.

Of interest in this connection is the present agitation respecting the Homœopathic Medical College at Michigan University. Under the arrangement described, this college failed to commend itself to the homœopaths, so that the members of this sect practically repudiated it. Hence its classes so diminished as to compel the regents to seek some other method more satisfactory to all parties. The plan which thus far has seemed to meet the wishes of the regular faculty, the board of regents, and a portion of the homœopathic faculty, was the abolition of the so-called Homœopathic Medical College, and the placing of a professor of Homœopathic Materia Medica and Practice of Medicine in the faculty of the regular school. The final decision has not yet been announced. But that the deans, of both the regular and homœopathic faculties, and the regular physician on the board of regents should unite in seeking to place on the faculty of the regular school a homœopathic professor, is significant of a drifting, quite startling, and the more as no public protest has been made against it by the regular profession. Other State universities, than that of Michigan, having medical departments, are arranged along similar lines. These are all more or less responsive to the demands of the popular will, and this will, generally speaking, demands the full recognition of one or more of the "pathies" and "isms."

The first extensive revolt against the written law under consideration occurred in New York. It was preceded by an extremely bitter conflict and caused not a few ripples in the American Medical Association. The result of this revolt was that the friends of the written law, established the N. Y. State Medical Association and retained their allegiance to said law, while the opponents captured the old State Society, abrogated the written and returned to the unwritten law. To many this seemed a revolutionary proceeding, but when it is remembered that the revolting faction

simply returned to the first principles of the medical profession, principles which satisfied the profession during thousands of years, the matter assumes a different aspect. The reformers only abrogates the written law of 1847, preferring the larger individual liberty of the profession anterior to that date. Previous to this, Massachusetts had a contest along similar lines, which resulted in affording sectarians equal rights with regulars, and turning popular prejudice against the medical profession.

The Mississippi Valley Medical Association gives its members entire freedom in the matter of consultations. Other medical societies in various places, have taken similar action, notably in Chicago, Cleveland, etc.

An extensive knowledge of the habits of prominent physicians leads to the conclusion, that a fat consultation fee is rarely refused because the attending physician is a sectarian. Personally the writer has often been told by colleagues that he was a fool because he regarded it a matter of gentlemanly honor to obey the spirit and letter of the law of consultations while he retains membership in socicties having this law as a condition of membership.

Another marked illustration of this drifting was seen when a committee of its own appointment, reported to the American Medical Association that it favored such alteration of the code of ethics as would permit consultations between all physicians properly educated, legally qualified to practice medicine, and of honorable reputation in the place where they live. When it is remembered that the committee so reporting individually obey both the letter and spirit of the code bearing upon this point, it will be evident that their report indicates a drifting of the medical profession.

This drifting is farther seen, in that regulars and sectarians work side by side on boards of health, state and local, and on boards of other state institutions. This very imperfect sketch shows that, whether we like it or not, the fact cannot be disguised that the professional relationship of regulars and irregulars are, at many points, multiplying and extending. If, finally, through these relationships the sectarians shall be swallowed up by the medical profession, history will repeat itself. Within the memory of living physicians, specialists of all sorts were ranked as "irregular," and with them were classed "practitioners of massage," "electro-therapeutics," "hydro-therapeutics," etc. Now work in these fields is regarded as the most honorable, and the workers receive the largest returns in money, honor and fame.

Whither does this drifting tend? The history of the past and the logic of existing social forces point to but one result, viz., the absorption of all ideas that are true and helpful, and all persons who are honest and of good report, into the medical profession. To this end, larger liberty will be accorded the individual physician. He will be permitted to choose his professional associates from among those whom he knows to be properly educated, legally qualified to practice medicine where they reside, and of good report. Qualifications other than these will be regarded as purely local, in their necessity and temporary in their existence, and to be controlled entirely by the individual physician. It were wiser to object to consultation with a physician because of known ignorance, lack of skill, dishonest methods, or disreputable character, than because of his sectarian name. Objection on the first ground is readily understood by any layman, but objection on the second fails to commend itself to most persons, and not infrequently brings the objecting physician into discredit.

The medical profession originated in the effort to systematically relieve human suffering and promote human health. Amid the glimmerings of dawning science, it jealously guarded each addition to its knowledge, and incidentally contributed largely to the advancement of science. In every age parasites have sought to ally themselves with the medical profession that they might use its resources to plunder a suffering, credulous humanity. To exclude such parasites from the profession has ever occasioned perplexing thought, and for this purpose the unwritten custom of centuries was maintained, and to add still more in the same direction, in 1847, the American Medical Association adopted the written law of consultations now in force. But from the facts presented, it is clear that at the present this law fails of its beneficent design. Large bodies of physicians no longer regard the written law as in accord with the nature of the medical profession, and believe that this law should either be abolished or made

to accord with the changed condition of our environment.

Apparently, if the profession is to present a united front to the world on this matter, a new statement must be made, satisfactory to the majority. All agree that the profession should be kept intelligent and clean, but all do not now unite upon a practicable method for attaining this end. Until such a method is devised and adopted with substantial unanimity, the drifting will continue; a drifting from a position incomprehensible by the laity towards one clear to every person; a drifting from a position calling for defence and explanation, towards a vantage ground commanding the entire field; a drifting from an indefinite standard towards a definite one; a drifting from a position affording no hope to those outside its circle, towards one giving hope to every intelligent, honest practitioner; a drifting from a position which loses the good work done by institutions other than its own, towards one in which it can absorb all good work, wherever done, and all good workers wherever trained; a drifting from a position of inflexible definition towards one of intelligent accord with forces animating the medical profession.

Urging on this drifting are very antagonistic elements. Physicians of the purest motives and highest character coöperate with those of selfish character and despicable motives. Promoting this drifting are State university medical schools, State medical examining boards, State and local boards of health, specialists, physicians; avaricious for fame, power or wealth, irrespective of the means by which they may attain their ends, and physicians jealous of professional honor and unselfishly serving humanity.

All these, however, are but instruments of far larger force, which form a part of the development of the medical profession as a portion of the nineteenth century civilization. Of these we note briefly the following: First—The intellectual atmosphere of the century has become softer, as seen in the diminishing asperity in religious, social, scientific, political and medical circles. Quite generally, we are learning that our opponents may be gentlemen, scholars, and valuable citizens, while vigorously opposing our individual beliefs and practices. Significant of the quality of this atmosphere was the meeting at Chicago of the representatives of all religions, and their discussing, under one roof, each others religious tenets. This atmosphere of free thought and untrammeled practice has stimulated men to expand their energies, without diversion, in the investigation of new fields, or enriching old ones; to develop good rather than destroy evil; to prevent infection more than to cure the infected; to establish the conditions needful to produce level-headed physicians, rather than fight sectarian titles.

Second—With the advancing century humanity has acquired a larger faith in the ability of truth to look after its own interests, if only each individual did his own life-work in the most perfect manner. Hence, physicians have been disposed to give plenty of rope to the offenders against truth, in the belief that thus they will best dispose of themselves after the classical method of Judas Iscariot.

Third—The rapid incubation of physicians; by emigration of the products of the doctor factories of other countries, (an importation which pays no government duty), and by the swarms yearly graduating from the medical schools of the United States; has swelled our ranks to quite uncomfortable proportions. The situation is still farther aggravated by the fact that vast numbers of patients, which naturally should contribute to the support of physicians, are largely absorbed by hospitals, ambulances, dispensaries, contract physicians, railway physicians, accident insurance companies, medical college clinics, and numerous private institutions supported by shrewd advertising. This crowding compels each physician to cultivate his field to the fullest degree possible. He is compelled to know all about the sectarians as well as the physicians of his field. This close contact has proved that some sectarians are better educated, more gentlemanly and honorable than some regulars. This personal knowledge renders it possible for him to coöperate with the sectarians in the management of cases in which they have a mutual interest and profit. Except for the crowding, this knowledge would have been difficult of attainment. Now it leads him to believe that professional character and ability are of higher importance than a sectarian name, and so powerfully drifts him away from the written law of consultations.

Fourth—Experience has shown that the fighting of a name, as that of a sectarian, is unprofit-

able to the fighter and the medical profession. Here, as elsewhere, "The blood of the martyrs is the seed of the chnrch." Persecution of sectarians, under their official designation, but increases their prosperity and discredits the medical profession. The profession is drifting to the practice of ignoring the special name and of looking after qualifications for doing creditable work, of persuading individuals to abandon untenable errors in theory or practice, or better still, of so training medical students that they will avoid "isms" and "pathies" and intelligently enter upon their relations with active physicians.

Conclusions.—1. In the matter of consultations the medical profession is drifting from the law written in 1847 to the unwritten law inherent in the medical profession since the first doctor entered upon his work—far anterior to any historic record.

2. This drifting was inaugurated and is continued by forces and agencies which have made the nineteenth century the most remarkable in history — individual men or institutions have merely served as instruments for the operation of these forces and agencies.

3. There need be no anxiety concerning this drifting. The medical profession will always remain anchored to its fundamental nature of a competent honorable brotherhood. The changes sought are merely the substitution of a thing of universal application for a sectarian name of limited scope. It is sought to exclude from fellowship all who are incompetent, or disreputable, whether they have or have not a sectarian name. The final attainment of this drifting will mark a far higher standard of professional life, and a truer exemplification of individual liberty.

4. It is believed that we are drifting towards the practical adoption of the following: "Every physician shall be deemed eligible for professional consultation who has shown that he has such preliminary training as enabled him to comprehend the study of medicine; has fully mastered the elements of medical science and art; has complied with existing laws respecting physicians in the state of his residence; and who has maintained an honorable reputation. Of these qualifications the physicians of his locality shall be the final judges. If those who know him best endorse him, then shall he be freely admitted to membership in all medical organizations and be eligible for consultations."

5. If the profession fails to agree upon a statement in substance like the preceding, the logic of events points to a rejection of the entire written law of 1847, and return to the unwritten law of previous centuries—the one now holding sway in all countries except the United States.

DIPHTHERIA.

BY W. J. WILSON, M.D., TORONTO.

Mr. President and Members.—That we may the better understand the treatment of diphtheria, it is essential that we should review the morbid anatomy of the disease and the conditions predisposing to it.

It is a disease mostly of early life, that being the time when adenoid tissue is most abundant in the throat and naso-pharynx, when glandular activity is greatest, and when nasal secretions are not only more abundant but are longer retained in situ than at any other period. Enlarged tonsils strongly predispose, from their prominence in the air passage, and especially from the amount of secretion retained around them. Associated with this condition, adenoid vegetations frequently block more or less the post nasal space, and produce mouth breathing and a more or less abnormal condition of all the surrounding parts.

A healthy mucous membrane will resist the disease much better than one that is defective. A bad stomach with coated tongue, or decayed teeth filled with food is a constant menace. The proximity of manure heaps, the throwing of kitchen slops just out of the door, and the storing all winter in large cellars under the dwelling, as is frequently done by farmers, of large quantities of vegetables, are frequent predisposing causes in country districts. In cities where the sewers contain the Klebs-Lœffler bacillus bad plumbing is a most fruitful cause. Of course where the germ of diphtheria is not in the sewer, the effects of sewer gas are to lower the vital forces, as would any unsanitary condition, and thus render the system more susceptible to the poison.

The conditions found vary much with the severity of the case. The membrane may spread

from the tonsil, which is usually the earliest point of attack, upwards through the nose, downwards through the larynx into the trachea and bronchi, or be limited to any one of these situations, or attack any abraded surface or exposed mucous membrane. Deposits have been found in both the stomach and intestines.

The pseudo-membrane is formed from epithelial cells, which have become inflamed and killed by the poison leucocytes, and fibrine, and contains, besides the Klebs-Lœffler bacillus, which is mostly near the surface, various pus-forming and pathogenic germs.

The diphtheria bacillus does not penetrate the tissues, but in passing through its life history produces toxines which are readily absorbed and produce the various toxic disturbances found in the disease. The associated germs may penetrate the tissues and produce suppurations or pneumonic complications. Necrotic foci are found in the bronchial glands and, in the severer forms, in the mesenteric and intestinal glands and internal organs.

From the paucity of lymphatic supply in the tonsil and larynx, little glandular enlargement takes place, but when the disease extends to the nasal chambers, the vascular and lymphatic supply is rich, and the glandular and systemic infection are apt to be early and profound. Albumin is found in the urine, and in the severer forms parenchymatous nephritis is apt to occur. The capillaries may take on hyaloid degeneration, and the blood remain fluid after death. This explains why nose bleeding is such a dangerous symptom. Dilitation of the heart cavities from muscular weakness is common, and may be increased by renal or pulmonary congestion. This condition of heart has an important bearing on operative procedures, and as it may not improve after intubation or tracheotomy, these operations should not be delayed till dilatation has taken place.

The diagnosis of diphtheria is often attended with much difficulty. In severe cases there can be little doubt, but in the mild ones and where the pseudo-membrane is limited to the tonsil and not in well formed patches, the diagnosis can only be cleared up by time or a bacteriological examination. During an epidemic we have all met with a greater than usual number of sore throats. This may in part be due to people being frightened, and coming with conditions which at another time they would not mention, but it is highly probable these are often mild cases of diphtheria, with little or no membranous deposit.

In the larynx or bronchi a primary deposit may or may not contain the Klebs-Lœffler bacillus, but the consequent laryngeal obstruction is the same. If the Klebs-Lœffler bacillus be taken as the test it becomes our duty in all doubtful cases to have a bacteriological examination made as soon as possible, and it is criminal to send patients to an isolation hospital on the first appearance of deposit on the tonsil, and surround them with cases of the pure culture before such an examination has been made. It is equally imperative that patients either in hospital or private practice should have cultures made from their throat and nose before their discharge. If this were thoroughly done there would be less complaint of discharged patients communicating the disease.

In the prophylaxis strict isolation is the most important point. This in country places, and especially in small houses, is often difficult. Where the well children can be removed in these cases their lives are often saved, but often there is no place to send them to, and they are forced to live in the infected house.

Under these circumstances we should treat those who are well from the first with the hope of either preventing their contracting the disease, or failing, that, modifying its severity. At present we are anxiously looking to antitoxic serum as a proficient prophylactic. But while using it we must not neglect other means. The children should be kept out of doors as much as possible, and warmly clad to avoid colds. Their digestion must be attended to, and iron and potash may be given with benefit. The nose and throat should be sprayed out with an antiseptic wash three or four times a day, to prevent lodgment of secretions and wash out any germs that may have settled there. The mouth and teeth should be frequently washed and disinfected.

School hygiene and a careful supervision of pupils are most important, especially during an epidemic, as at that time mild cases may be able to attend school through part or all of the disease. Children with sore throats should be sent home at once, and if cases recur, the school should be closed.

The dietary of the diphtheria patient is one of the most important matters in the whole treatment. Every means in our power should be used to keep up the digestion and nutrition to the highest point possible. Food should be fluid, bland, easily digested and as nutritious as possible. Digestive ferments may often be used with advantage, and stimulants should be given early, and repeated according to the requirements of the case.

Careful feeding, perfect rest and tact in nursing and general management are highly essential, and a defect here often turns the scale in spite of the most judicious medication.

Among drugs, everything from aconite and tartar emetic to alcohol has, at one time or another, been lauded as a specific, and, after a longer or shorter period, discarded or forgotten. The virulence of the epidemic, the surroundings of the patient, the feeding and stimulation, and the personal equation of both nurse and physician, all have an important bearing on the results, and make it difficult to judge of the merits of any remedy until it has been tested by many observers and in many series of cases.

Believing the disease to be of local origin, efforts have been made to exterminate it by scraping or rubbing off the membrane and applying germicides to the resulting abrasion. This plan must be begun at the earliest formation of membrane and is only applicable when the patch is small in size and easily accessible. After removal, solutions of perchloride or biniodide of mercury are freely applied. The whole process is repeated as often as any membrane re-forms. This method has seemed to the writer to check the disease somewhat, but not to have much effect on the whole duration of the disease. The same remarks apply to burning by caustics or the galvano-cautery, with the added danger of burning more than we desire and thus spreading the patch.

Seibert's method of injecting chlorine water beneath the pseudo-membrane has had brilliant results claimed for it, but it requires special instruments for its application and cannot be used in all situations. When limited to the tonsil, these measures are easy of application and appear to do good, but when we consider that these are the cases which are apt to recover under simple supporting measures, it becomes difficult to estimate the value of treatment.

It is difficult to carry out these measures in young children without making the little patients struggle so violently, that the waste of his strength may often cause them more harm than the treatment does good.

Papoid and the pepsins will digest the membrane, but while doing so, frequently have the disadvantage of making the throat tender and interfering with deglutition. Furthermore, they do not seem to shorten the duration of the disease.

Hydrogen peroxide and pyrodine are of great service by their disinfecting and solvent powers on the membrane. They act as efficient germicides and may be applied in most situations. Care, however, should be taken that the peroxide is pure and non-irritating, otherwise it seems to prolong the trouble; a little membrane will keep forming in a most persistent manner for some time after the most of the throat is clear.

Applications of carbolic acid, hydrarg. perchloride or biniodide, sulphur, solutions of chloral, iron, and in fact every known germicide, has been tried, and with more or less benefit. If the application be not enough to kill the Klebs-Lœfler bacillus or its associated germs, it will at least lessen in some degree their activity.

Paraffine and varnishes have been applied to exclude the air from the membrane, with the hope of limiting germ growth and preventing the spread of the disease by air currents, but their usefulness is very limited. Poultices and hot applications give a feeling of relief to the swollen glands but beyond this are of no use. Cold has a more decided effect. It may be conveniently applied by Lister's coil. A recent German authority has shown a good percentage of recoveries by this method. In what few cases I have tried it some symptoms were markedly relieved, notably pain in swallowing. It did not lessen the duration of illness or prevent the membrane spreading, nor did it prevent a severe post-diphtheritic paralysis.

Where the nasal passages are affected our great danger is systemic infection from the great vascular and lymphatic supply of these parts. Here our every effort must be directed to keep the passages free, and failure in this particular, as a rule,

means absorption of a fatal dose of poison. Hydrogen peroxide and pyorozone do excellent work in these cases, not only by disinfecting, but by keeping the passages open by their solvent action on the deposits.

Simple washing by saline solutions is often successful, but not having the solvent power of the peroxide on the deposits the passages can not be kept as free. If antitoxine stops the formation of toxines we will be able, in these nasal cases, to accomplish a great deal of good by the early and energetic use of solvents and washes.

Calomel fumigation requires more than a passing notice. Those who have used it speak very highly of it especially in larygngeal cases. The child is covered by a tent and from 15 to 60 grs. of pure calomel is heated over a spirit lamp or some convenient contrivance, so as to vaporize it slowly and so that the child can readily breathe it in. This is done every two or three hours, using the large and oft-repeated doses in the wore severe cases. Sometimes these large doses are used hourly for a few hours and from 2000 to 5000 grs. of calomel are used in a single case. The child's skin should be covered as much as possible to prevent settling of calomel on it, as it is a local action on the respiratory tract which is desired. His mouth and teeth must be cleansed after each fumigation and if the gums become spongy use a wash of pot. chlor. with astringents. Stimulants should be administered before each fumigation, and iron given to counteract the anæmia caused by the calomel treatment, as well as the asthenic tendency of the disease. The calomel must be absolutely pure to avoid irritation and the attendants must be careful to avoid inhaling the vapor, for although it seems to affect the patient very little it is often very troublesome to others.

The reports of recoveries by fumigation in laryngeal cases without intubation or tracheotomy have been very encouraging and where these operations have been done the results have been much better with than without the fumigations. To quote the statistics of Doctors McNaughton and Madden: out of 2417tracheotomies there were 286 recoveries, or 24.2%; out of 5546 intubations, 1691 recoveries or 30.5%; 505 fumigations in laryngeal diphtheria, 275 recoveries or 54.5%; 85 of these 505 were subjected to operation after fumigation failed, and of these 29 recovered, leaving 48.7% of recoveries for the fumigations alone. Where calomel fumigations were used and operation later 34.1% of recoveries were recorded, against 24.2% for traceotomy and 30.5% for intubation without fumigations.

These statistics show a decided benefit from the fumigations, but while such is the case, it is not advisable to trust to it too long where there is much stenosis, else the heart will become dilated and the vital powers so reduced as to render operative procedures useless. There is no question but early operation, be it intubation or tracheotomy, will give much better results in laryngeal stenosis than where it is delayed. It is also not a matter of indifference which operation is selected. Intubation has the advantage of making no wound, of being more readily consented to by parents, and if not successful, of not militating against any further operative measures. Closure of the nasopharyngeal space, great œdema of the glottis or extensive deposit in the trachea, would contraindicate intubation and point to a primary tracheotomy.

Among very young and weakly children, especially if the nursing is poor, intubation is preferable to tracheotomy. If the antitoxine treatment comes up to our expectations it will render results much better from both these operations by loosening membrane early and lessening the duration of the disease. There will be a certain class of cases with so much deposit in the trachea that it can not come through the glottis. In these cases, with antitoxine and calomel fumigations to hasten separation of the membranes, tracheotomy could be performed and the membrane removed by a curette through the tracheal wound, and thus, otherwise hopeless cases rendered curable. Where the amount of deposit is not excessive intubation is the ideal operation, and, where calomel fumigations fail to give prompt relief, should always be resorted to.

Whatever the antitoxine treatment may ultimately do for us, at present it can only take a place in our general treatment. It is not right to trust the treatment of diphtheria either to antitoxine or any other single remedy. No matter how efficacious antitoxine may prove in killing the Klebs-Lœffler bacillus, we must remember there are at the same time other pathogenic germs

in the throat and other conditions of system produced by the already absorbed poisons which will continue to call forth our best remedial efforts. Hygiene, diet, stimulants and atoxic and supporting treatment, with the best form of local antiseptics and germicides, will still be required and the results of antitoxine or operative procedure will be influenced largely by a judicious handling of all our combined resources.

Selected Articles.

WHEN AND HOW TO CURETTE THE UTERUS.

Indications.—The operation of curetting the uterus is indicated in a number of pelvic disorders which differ widely in their nature and gravity.

(1) Probably the lesion that most frequently demands its performance is chronic endometritis. But great care is required in the proper selection of cases, and this for two reasons. (*a*) Many cases of endometritis recover completely without any operation. Thus in simple uncomplicated cases we would first try the effects of non surgical remedies—rest, hot douches, saline aperients, glycerine and ichthyol tampons, such drugs as bromide of potash, chlorate of potash, hydrastis and viburnum, and the occasional swabbing out of the uterus with iodine or carbolic acid. Should these measures fail, curetting is distinctly indicated, and will, in the great majority of cases, effect a cure. (*b*) Endometritis is frequently associated with other and much more serious pelvic lesions, which call for a very different line of treatment. Thus endometritis, due to sepsis or gonorrhœa, is often complicated with pelvic cellulitis and peritonitis, with ovaritis, salpingitis, or pyosalpinx. To curette the uterus in the presence of such lesions would be to court disaster. I have seen a slumbering salpingitis converted into a virulent and fatal pyosalpinx by such a proceeding. It may be laid down as an absolute rule that if there be evidence of periuterine inflammation or disease of the uterine appendages, curetting is contraindicated.

(2) The second great class of cases which call for curetting are those in which we have, as the result of the incomplete emptying of the pregnant uterus, the retention within its cavity of pieces of membrane, fragments of placenta, even portions of a putrid fœtus. These retained morsels may give rise, on the one hand, to severe uterine hæmorrhage, and on the other to septic absorption. The symptoms are not at all in proportion to the size of the offending fragment. It is remarkable how small a piece of placental tissue—not larger than a hazlenut—will cause frightful and most persistent floodings. On the other hand, I have removed a mass of placenta as large as a man's fist, which had been retained in the uterus for many months, and which only caused an offensive discharge.

In these cases there must be no delay in operating—no dallying with medicinal remedies. Ergot and hydrastis are useless to relieve the hæmorrhage; antiseptic injections will not stop the offensive discharges; quinine and antipyrin will not check the progress of septic absorption. As soon as the presence of the offending fragment is diagnosed it must be removed with the curette. In no class of cases does operative interference yield more brilliant results. The hæmorrhage ceases at once, the offensive discharge disappears, the symptoms of septic intoxication subside, and the patient's health is restored with marvellous rapidity.

But it must be remembered that in the septic cases the prognosis depends to a large extent on the degree of septic absorption. If it be only a sapremia, the removal of the putrid fragment will cure the patient; if it be a septicæmia, the outlook is much graver. Curetting will undoubtedly save many cases of puerperal septicæmia in which the *fons et origo mali* is a mass of necrosing material in the uterus, and in which the systematic infection is not profound. But it is obvious that if a pyosalpinx have formed, or there be suppurative peritonitis, curetting will do positive harm. Curetting is not a panacea for puerperal fever; much discrimination is required in the selection of suitable cases. The best results are obtained where the symptoms clearly point to a retained and putrid fragment in the uterus, where the surgeon is called at an early stage of the disease, and where the clinical phenomena are those of septic intoxication rather than of septic infection.

(3) There are two diseases of the uterus in which curetting has been advocated as a palliative, namely, myoma and cancer. It has been recommended in certain cases of myoma as a means of checking the excessive losses. I cannot too strongly condemn such a proceeding. If the tumor be causing symptoms severe enough to call for interference, then it is better to perform removal of the appendages, myomectomy, or hysterectomy. If the symptoms be so slight as not to call for such severe measures, rest and the usual medicinal remedies will suffice. Curetting at best would only temporarily relieve the patient, and might do infinite harm by inducing sloughing of the tumor and subsequent septicæmia.

So, also, in the case of cancer, it is questionable if it afford any but the most transient benefit. Even if it temporarily relieves the patient, it is obvious that we cannot by its means remove the whole disease and so cure the patient. I have, it is true, seen striking temporary relief afforded by

freely scraping and gouging away the friable rotting diseased surface, and then vigorously searing with Paquelin's cautery the raw tissue exposed. The hæmorrhage and stinking discharge cease for a time, the patient's pain diminishes, she puts on flesh, and frequently buoys herself up with false hopes of cure. But at best the respite is short; and in many cases when the disease again manifests itself it advances with fearful rapidity. When the growth is strictly limited to the cervix or the endometrium, we should offer the patient the more certain hope of cure afforded by vaginal extirpation of the uterus. If the disease be too far advanced for this operation, the less we interfere with it the better.

(4) Lastly, curetting is occasionally demanded for diagnostic purposes. Where we suspect that the patient is suffering from early cancer or sarcoma of the uterus we may obtain, by curetting, fragments of tissue for microscopic examination, and may thus diagnose malignant disease in its early and most remediable stage.

Armamentarium.—The armamentarium for curetting the uterus should include the following: Anæsthetics, antiseptics, Clover's crutch, razor, speculum, vulsellum forceps, a set of uterine dilators, a set of curettes, including a "flushing curette," uterine sound, scissors, six Playfair's probes (or some substitute) armed with absorbent wool' Paquelin's cautery or a bottle of iodized phenol, iodoform gauze, sponges or gauze compresses, catheter, douching apparatus. I shall presently refer in detail to the use of these various instruments.

Asepsis.—It is of the utmost importance that everything that comes in contact with the genital tract during the operation must be aseptic. The instruments should be made entirely of metal and should be boiled for fifteen minutes in soda solution (one per cent.) immediately before each operation. Instead of sponges I use gauze compresses made of a square of gauze folded into eight thicknesses. These should be sterilized before the operation by boiling or steaming for an hour. They are not quite so absorbent as sponges, but they are cheap, easily prepared and easily sterilized. The same compress should never be used twice; and after the operation all that have been used should be destroyed. For the disinfection of the hands of the surgeon, his assistant and the nurses, I believe in prolonged scrubbing with soap and lysol solution (1 in 100), using a nail brush and loofah, followed by immersion in corrosive sublimate solution (1 in 1000).

Preparation of the patient.—The preparation of the patient is important. When we can choose our time the operation is best performed about midway between two menstrual periods. In many cases, however, as when the hæmorrhage is continuous or the symptoms are urgent, we must operate without delay. For twenty-four hours before the operation she must rest in bed. The bowels must be freely opened the day before; and on the morning of the operation an enema should be given to ensure an empty rectum. The vagina should be well douched the evening before, and again on the morning of the operation, with some reliable antiseptic solution—lysol, iodine, or corrosive sublimate. Immediately before the operation the nurse should pass the catheter and empty the patient's bladder.

The patient having been anæsthetized, she must be placed in the lithotomy position, and this is most conveniently effected by Clover's crutch. Even in cleanly women the hair about the genitals is laden with micro-organisms and hence should now be shaved off with a razar. The vulva should be scrubbed with soap and lysol water (1 in 100), care being taken to remove the sebaceous matter that is apt to collect in the various folds.

The vagina should be similarly cleansed and as far as possible rendered aseptic. It should be vigorously wiped out with pads of sterilized gauze. in order to remove as far as possible the thick mucous discharge that besmears it. This mechanical scouring is more effective in freeing the vagina of germs than is mere douching with antiseptics.

Before commencing the actual operation a final bimanual examination should be made in order to make sure that there is no disease of the appendages and that the uterus is not fixed by perimetric adhesions.

Insertion of speculum.—The perineum should be pulled back by some form of speculum. Sims' duck-bill speculum is the form usually employed for this purpose, but it necessitates the employment of an assistant. I can strongly recommend, in place of it, the use of Auvard's speculum. This is heavily weighted with a ball of lead, so that the instrument is self-retaining, and by its own weight pulls back the perineum and posterior vaginal wall. I have found it of great service when I have had to perform curetting without assistance. It can only be used, however, when the patient is in the lithotomy position.

Dilatation of the cervix.—The next step is to dilate the cervix. This is not always necessary. For instance, in puerperal cases the os is usually widely gaping and the canal patulous. There are numerous methods of effecting dilatation, each of which has its own peculiar drawbacks, though some are much more objectionable than others. Of all methods, that involving the use of tents is the most dangerous. The risk of sepsis, with all its disastrous consequences, is so great that the tents may at once be dismissed from consideration.

Mr. Lawson Tait's method of dilating the cervix by slowly forcing through it a series of conical

dilators, by means of continuous elastic pressure, is highly ingenious. It will, in the great majority of cases, effect its purpose well, and secure full and complete dilatation of the cervix. But, unfortunately, the method has many serious drawbacks. It is tedious, the process occupying from twelve to forty-eight hours. It requires very careful adjustment of the elastic cords in order to direct the dilator in the right direction. Should the uterus be retroflexed or anteflexed the dilator is apt to plough its way into the muscular tissue of the uterine wall and not dilate the internal os at all. It necessitates frequent attendance and repeated examinations on the part of the medical man. It usually causes the patient much pain, sometimes necessitating the free administration of morphia. But probably the most serious objection to the method is that it is rather apt to be followed by inflammatory mischief in and around the uterus, partly from mechanical irritation, partly from sepsis. I used this method exclusively for over four years, but was compelled reluctantly to abandon it in favor of rapid dilatation by means of Hegar's dilators, or some modification thereof. This latter method is infinitely easier, simpler, and less troublesome for the surgeon ; it entails no suffering on the part of the patient, being effected under anæsthesia ; and I am convinced that it is safer. Whilst the dilatation it effects is not so perfect as that attained by Mr. Tait's method, it is all that is required for the purposes of curetting.

The particular dilators I myself prefer are those introduced by my friend Doctor Hawkins-Ambler, of Liverpool. I have used them extensively for the past ten months, and have found them very satisfactory. They consist of a graduated series of metallic bougies constructed on the principle of the " wedge-shaped " bougies used for dilating the male urethra. Being made of solid steel they are easily rendered aseptic by boiling in soda solution (one per cent.) for a few minutes. Having a highly-polished surface, they slide in with a minimum of friction. A set of six will be found sufficient for all ordinary purposes, and will easily, rapidly, and safely effect dilation.

The anterior lip of the cervix should be seized with vulsellum forceps and drawn down to the vulva. If the uterus be so held by adhesions that it cannot be pulled down, the operation had better be abandoned. Having ascertained by means of the uterine sound the precise depth of the uterus and the direction of its canal, the surgeon holds the vulsellum firmly in the left hand and with his right slowly passes the smallest-sized dilator (smeared with some antiseptic lubricant) into the uterus. If it meets with no resistance he at once withdraws it and passes the next size. If the cervix grips the dilator and resists its passtage, the surgeon must press the instrument slowly inward. Having gotten it in he should wait a little before withdrawing it. After a longer or shorter pause the grip of the cervix will be found to relax, and then the instrument may be withdrawn and the next size inserted. If this relaxation of the cervix does not occur within a few minutes the instrument should be withdrawn and re-inserted.

The limit of safe dilatation varies in different cases. Where the patient has previously had a child it is usually easy to dilate the cervix until it will admit the forefinger. But if the uterus be nulliparous, and particularly if it be infantile, the process of dilatation is more difficult, takes a longer time to effect, and should not be carried to the same extent. As a rule it is possible to dilate a parous uterus in from ten to fifteen minutes, whilst a nulliparous womb may require half an hour or more. When the most resisting part of the cervix is at the external os it is sometimes necessary to nick it bilaterally with scissors before dilating. The chief objection to the method of rapid dilatation is that if the tissue of the cervix be very resistant it will not stretch but tear. If unnecessary violence be employed, the uterus may be perforated or even ruptured by vertical splitting. Such accidents, however, should never occur if reasonable care be taken and there is no undue force or haste on the part of the surgeon.

A less serious accident is laceration of the cervix, which may occur if its tissue be very soft and vascular, the teeth of the vulsellum tearing out when the dilator meets with resistance. If the degree of dilatation will permit, the forefinger should now be passed into the uterus and its cavity explored.

Application of the curette.—For nearly all cases the sharp curette will be found preferable to the blunt one, and the best form is a modifiction of Simon's sharp spoon. It should be made wholly of metal so that it may be sterilized by boiling before each operation. The largest size that will easily pass the cervix should be gently introduced and passed without any force until it impinges on the fundus. Steadying the cervix with the vulsellum, the sharp edge should be pressed firmly against the mucosa and the curette drawn closely down—scraping off a vertical strip of the whole thickness of the mucous membrane and exposing the muscular coat.

By a repetition of this manœuvre a series of parallel strips are removed until first the anterior, then the posterior, and then the lateral walls are completely denuded. The surgeon must then carefully curette the fundus and the two upper lateral angles leading to the Fallopian tubes.

Cleansing the Uterus.—The flushing curette is a most useful instrument when the uterus contains much debris—as in cases of retained secundines. The handle and stem are tubular, and if the instrument be connected with the tubing of a

hydrostatic douch-can, will permit of the passage into the uterus during the act of curetting of a constant stream of weak antiseptic solution, which carries with it, as it escapes through the cervix, all clots and loose fragments of tissue. If the solution be used hot enough it will also check bleeding.

If the flushing curette be not used, the clots and tissue debris should be wiped away by means of probes covered with absorbent wool. The instrument commonly used for this purpose is "Playfair's probe." This consists of a wooden rod capped with metal. It is objectionable, because blood, etc., is apt to lodge between the wool and the metal, or soak into the wood, and be a source of sepsis. Where the probes are made wholly of metal (steel or aluminium), they are not open to this objection, being easily sterilized by boiling or being heated in a flame. They are, however, somewhat expensive (costing three or four shillings each).

For the last two years I have used wooden skewers ("pheasant skewers") instead of Playfair's probes, and have found them to answer admirably. I buy them from the poulterers in bundles of a hundred. To prepare them the ends must be roughly rounded off with a penknife, and the skewers boiled or steamed for an hour or more to sterilize them. When wanted for use the end should be wetted and the wool rolled on in a thin film. They are so cheap (costing sixpence to one shilling a hundred) that one can afford to destroy, after each operation, all the probes that have been used. No probe is used twice, and in this way the risk of carrying septic infection from one uterus to another is reduced to a minimum. When it is remembered how frequently curetting is performed in septic cases, it will be seen that this risk is no imaginary one.

Application of Caustic.—Having thoroughly washed or wiped out the cavity of the uterus and cleared away all clots and debris, we should apply to the raw surface left some powerful cauterizing or disinfecting agent. For a long time I used to sear the interior of the uterus with Paquelin's cautery. The objection to its use is that the caustic effect is not distributed evenly over all the raw surface. The internal angles and part of the fundus are apt to be missed, whilst the cervix may be so severely burned that sloughs form. At each spot it sears, its germicidal influence is of course intense; but it does not affect all parts equally, the sulci, crevices, and lateral angles escaping. For this reason it is better to swab out the uterus with a caustic liquid such as iodized phenol, applied on a wooden probe armed with absorbent wool. Any excess of the caustic that trickles out of the cervix must be at once removed with absorbent wool or gauze sponges.

Packing the Uterus.—A long narrow strip of iodoform gauze (one inch wide and one yard long) should be ready at hand, and the uterus firmly packed with it, the end being left hanging out of the cervix into the vagina. This gauze packing serves four useful purposes—it soaks up all excess of iodized phenol, it checks bleeding from the denuded surfaces, it protects the raw surface from infection from the vagina, and it ensures the drainage of the uterus. The vagina must be wiped free from clots, etc., and then lightly packed with iodoform gauze. A pad of antiseptic absorbent wool is placed over the vulva and fixed with a T-shaped bandage. The gauze may be removed on the third day, and thereafter the vagina douched night and morning with lysol or iodine water. In all cases the patient must stay in bed for ten days after the operation.

Results.—The immediate risk of the operation is extremely small, and the ultimate result excellent, if the operation be skilfully performed, in suitable cases, and due aseptic precautions be taken. Conversely, if the surgeon use unnecessary force or bungle his work, or disregard contraindications, or neglect the rules of surgical cleanliness, the patient runs the gauntlet of such disasters and complications as rupture or perforation of the uterus, laceration of the cervix, pelvic cellulitis, pelvic peritonitis, salpingitis, pyosalpinx, septicemia and pyemia—truly a formidable list! Not one of these evil sequelæ ought, however, to occur if the surgeon follow the indications I have laid down in this paper.—Dr. Christopher Martin in *The Provincial Medical Journal.—The Times and Register.*

AORTIC ANEURISMS. THEIR PRESENT STATUS WITH REGARD TO TREATMENT, MEDICAL AND SURGICAL.

(Concluded from November No.)

To review this method briefly, there have been some sixteen cases reported of the introduction of wire within the sac, with two cures. It is to be specially noted, that in both the successful cases the method adopted differed in exactly the points which have been mentioned as to be criticized in Dr. Abbe's cases. In the first place, silvered copper wire was used, which is almost without elasticity, and but a fraction of the enormous quantities used by other operators was introduced. In Loreta's case, six and a half feet was the amount, and in Morse's case four and a half feet. Both these patients recovered, and I may add that they were the only cases operated on by this method of which this may be said. All the other operators used immense lengths of wire, as in the cases which I have quoted. What are the practical points which we may learn from the history of this procedure?

First, that it is possible to puncture an aneurism with a fine canula without risk of serious hæmorrhage, either at the time or subsequently through the puncture. Abbe's case did not lose three ounces of blood, although when the canula was first introduced the blood spurted three inches. This part of the operation is therefore without serious danger, an important lesson. Second, the use of wire or any other material, which, when within the sac, will increase the pressure, is attended with risk. This forbids the use of elastic wire. Third, the introduction of a large mass of wire, even although it be inelastic, is not advisable, first, because of its weight, and second, because so large a quantity of wire cannot be introduced into a small cavity without producing tension, which is the very thing to be avoided in an aneurism.

The use of electricity in connection with a mass of wire within the sac has already been alluded to, but the method of inducing the formation of a clot by galvano-puncture alone far antedates the method of Morse, having been first used by Phillips in 1829.

To Ciniselli, however, we are indebted for its full development. So far there have been 114 cases reported, with the following results: Temporary benefit, 69; 38, no improvement; 7, doubtful. Barwell, in his commentary on Cinisell's article, says that the improvement in most of the cases reported as benefited is to be regarded as very doubtful. Even Dujardin-Beaumetz admits that the benefit was temporary, the interval of life in the most favorable case being five years. One may criticise this method as follows: In the first place, the amount of clot produced around each needle is very small, so that where several needles have been used, we do not have a uniform deposition of fibrin throughout the whole interior of the sac, but rather several isolated deposits, and these may or may not be at the weakest point. The method does not seem to be attended with much, if any, danger. Observers seem to support Barwell's notion, that the method is not as productive of benefit as the authors in question would lead us to suppose. So far, all the procedures which have been noticed, have dealt with the sac itself, and are particularly adapted to anuerisms of the thoracic aorta, where interference with the vessel itself is out of the question. I have said out of the question, nevertheless, I have been able to find two cases in which a temporary ligature of the thoracic aorta was done for aneurism. One of these cases was reported in the *An. d. Cirgia*, Argentine Republic, Buenos Ayres, 1892, xv., p. 146. In this case the vessels ruptured into the posterior mediastinum. The other case is reported by Villar in the *Mem. et Bull. Soc. de Med. et Chirurg.*, Bordeaux, 1892-3, p. 20-30. In this case the rupture also occurred into the posterior mediastinum. Any discussion of these cases seems out of place, as we do not live in the Argentine Republic or in France, and such interference here might bring us into strained relations with our Boards of Health with regard to the proper wording of the death certificate. It does not seem out of place, however, to discuss the question as to whether the abdominal aorta may not possibly be made the subject of an operation, which shall be feasible and curative. Already in England a very common way of treating aneurisms of this part of the aorta has been by means of compression with the aorta compressor for a number of hours, generally under an anæsthetic. Ten cases have been treated after this method, five successful, five unsuccessful. All the deaths have resulted from injury to the abdominal viscera, due to the long-continued and great pressure employed. The method was employed before the days of antiseptic surgery, and its use was due to the dread which then prevailed of opening the peritoneum. An operation, which, although seldom done, has a record of fifty per cent. of recoveries, deserves more than a passing mention. Evidently in the successful cases, the circulation in the abdominal aorta was, if not entirely obstructed, sufficiently obstructed to effect a cure. Therefore this may be regarded as possible, to obstruct the blood current through the aorta long enough to cure an aneurism, and yet not injure the vessel at the point compressed so as to give rise to hæmorrhage. Now may this be safely done with regard to the opening the peritoneum for merely explorative purposes? I have seen the peritoneum opened merely because a woman complained of a constant pain at a particular point, there being no evidence whatever of tumor. The operator found nothing, and closed the abdomen with the remark that if the pain was of hysterical origin the operation would probably do the woman good anyhow. There is hardly any operation with less risk nowadays, than these merely explorative openings. It is extremely rare for an accident to happen as a result of the operation itself. We may, therefore, set this consideration aside. We are at liberty certainly to examinean abdominal aneurism. Can we safely apply a ligature to the vessel, either by temporary ligation or permanently? Let us consider the first question. If the ligature is to be applied above the origin of the renals, the only possible procedure would be the temporary ligature or ligation immediately below, for I do not think that there is sufficient collateral circulation between the thoracic and lumbar intercostals to supply the kidneys with sufficient blood to keep the system clear of urea. If the old methods of ligation are to be adopted, which entail the use of a rather narrow ligature with rupture of the inner coats, and obliteration of the vessel, I do not believe that we can depend on this method of tem-

porary ligation, which is what is meant in the two cases of temporary ligature of the thoracic aorta, which I have mentioned. The ligature is simply tied, so as to rupture the inner and middle coats, and then removed. I need not detail the experiments on animals on which this method is based. Suffice it to say, that our expectations that the arteries of the human subject would behave in the same manner, has not been realized. We may, however, be led to a successful method of ligation, if we consider what is involved in the successful compression of the aorta by a compressor. It seems that the cardinal principle which should guide us, is the fact that this vessel will tolerate approximation of its walls through a large area, when it will not bear the compression of a narrow ligature involving the rupture of its coats. Is that not the lesson which these five successful cases teach us? It may be possible in this manner to bring about obliteration of an aneurismal sac without the obliteration of the main vessel. Even admitting that in these cases cited, the aorta was rendered impervious, we are then taught that it is possible for this to be done, and that the collateral circulation in the course of a few hours will render it possible for the tissues supplied by the original trunk to draw a competent supply from the anastomosis. To one or the other of these conclusions must we come in the light of these five cases. With regard to the practicability of performing the operation of ligation of the abdominal aorta, it may be observed that it has been done ten times, and that all the cases have been fatal. An analysis of the cases, however, fails to show that the ligation had anything whatever to do with the fatal result, except in one case. In four of the cases the operation was performed for the relief of hæmorrhage, which had already brought the patient to death's door. The remaining six cases were for aneurism. These ten cases may be tabulated as follows:—(1) Escape of inflated intestine; breaking of aneurism needle; long search for it in folds of mesentery; insufficient care in closing bleeding vessels. (2) Bladder disease. Dilated ureter. (3) Bursting of the sac by manipulation. Inclusion of ureter. (4) Fatty degeneration of heart. (5) Very complicated injury caused by the previous condition rather than by the operation, which terminated in a very different procedure than that intended. (6) Malignant disease of kidney. Nephrectomy. The four cases not included in this list, lived forty, forty-three, sixty hours, and ten days twenty-one hours. Therefore Barwell remarks, that the chief theoretical objection to the operation, oppression of the heart and lungs, seems to be met by these facts. The first patient died of peritonitis. Of the second case, the cause of death is not given. The third died of exhaustion after secondary hæmorrhage from the common iliac, for which the aorta had been tied. Monteiro's patient, after living almost eleven days, died of secondary hæmorrhage. In his case the narrow ligature was used after the old method. In a suitable case, therefore, there does not seem to be anything in the history of these four cases to forbid us with improved methods of ligation to make the attempt to save life by placing a ligature, temporary or permanent, upon the abdominal aorta.

The recent work of Ballance and Edmunds on the ligation of arteries in continuity, one of the most valuable contributions to surgical science which has appeared in many years, offers suggestions which may render it possible, by using the knot and the method of ligation which they advise, to do what has never yet been done, successfully ligate the aorta. They insist that it is not only not necessary to divide the two inner coats of an artery to successfully occlude it, but that this is precisely what should be most carefully avoided. Their experiments show that it is only necessary to bring the inner walls of the vessel in contact and keep them there, and that the vessel is thus just as successfully occluded as in the old method, without the same danger of secondary hæmorrhage, For this purpose, the ligature should be flat, soft, broad, and with a knot, which shall not slip. For this purpose they have devised a knot which they have termed a stay knot. It is made as follows, quoting from the authors: "The best way of tying two ligatures is to make on each separately, and in the same way, the first hitch of a reef knot, and to tighten each separately so that the loop lies in contact with the vessel without constricting it. Then taking the ends on one side together in one hand and the two ends on the other side in the other hand, to constrict the vessel sufficiently to occlude it, and finally to complete the reef knot. The simplest way of completing the knot is to treat the two ends in each hand as a single thread, and to tie as if completing a single reef knot. This knot we have called the stay knot, and it is this which we recommend." I have had practical experience with this method, and think most highly of it. My first operation in my service at the Long Island College Hospital was the ligature of the femoral in Hunter's canal for the relief of popliteal aneurism, which was near rupture, and causing the man intense suffering. On examining the artery previous to operation, in Scarpa's space, I found it baggy. No other word expresses its condition. It had absolutely no resiliency. The man was seventy years old, and I felt sure that to use the narrow ligature would be to invite secondary hæmorrhage, even if I did cut clean through the vessel at the time, an accident which has by the way actually happened. I made up my mind to use the method which I have described, and to use six strands of floss silk, the material recommended. I found the

vessel without much difficulty and applied the silk, three strands above, three below, and cut between. The vessel was very large, the largest I have ever seen. At the point of ligation it was as large as my thumb, and as I held the ligature in my hand and looked at the cut ends of the artery, I held my breath for a moment and anxiously entreated my assistant to keep the vessel under his fingers at Scarpa's space. The particular point to which I wish to call attention is the condition of the three coats. Each one was separate and distinct from its neighbor. So degenerate was the vessel that there was absolutely no apparent connection between the different tunics, no more than between a man's coat and his vest. I am happy to say that I had no hæmorrhage, neither then nor subsequently, and the wound healed by first intention, the floss silk giving no trouble. The man lived more than two months, and finally died of exhaustion from slow progressive gangrene, due to the inability of the anastomotic circulation to supply the limb, his friends refusing to permit further operative measures. This artery was the most utterly diseased I have ever seen, and I am now in my sixth year in the dissecting room, and have seen many hundred arteries. I am quite sure that I should have promptly cut through the vessel had I used a hard or round ligature, and I do not believe that any other method than that of B. and E. would have been successful. The walls of the vessel were brought together for the space of at least one-half an inch by the floss silk, and there was no injury inflicted on the vascular tunics softened as they were by fatty degeneration. At the time I thought, here is the method, if any, by which to ligate the aorta. It fulfils the indications pointed out in my remarks on the method of compression by apparatus. There is no doubt but that the method of B. and E. is that which we must use, if ever we are to ligate the aorta successfully. There now comes up the question as to whether the ligature on the vessel shall be permanent or temporary. If it be necessary to apply the ligature above the origin of the renals, there is no question in my mind that any permanent occlusion of the artery would result in death by uræmia. It is more than probable that in this situation we shall never be able to interfere with the circulation in this great vessel. If, however, the circulation in a vessel of this size may become re-established after a temporary ligature, which, lasting several hours, shall yet do no injury to the walls of the artery, it still may be possible to ligate above the renals, but not otherwise. We may gain some information on this point by experiment on animals, but we can never be certain of the human subject until we have tried it. There is another method of diminishing the circulation in a vessel of large calibre, which may prove of service in such a contingency. In a water pipe the velocity of the flow of fluid is diminished, if the pipe turn at an angle. The diminution increases with the degree of the angle, until when the angle becomes a right angle. almost the whole of the head due to the velocity of the stream is lost. I have thought that possibly advantage might be taken of this fact to so reduce the velocity in the blood current of the aorta, as to render it possible for the contents of an aneurismal sac to solidify by producing an antero-posterior angle in the vessel. Whether it is possible to produce such an angle by slipping under the vessel a sterilized glass rod or soft rubber tube, I do not know, but intend to make the experiment on animals. My apology for bringing these suggestions before the Society to-night, must be the intractable nature of these cases, and the failure of any ordinary means to be of use to us. Dr. Wyeth, in a personal communication to the writer, has suggested the possibility of making a gradual ligation so as to allow the collateral circulation to become established. His idea is to place one ligature around the vessel, which shall more nearly stop the circulation, and so on. As I have before stated, I do not believe it possible to establish sufficient collateral circulation by way of the intercostals and the anastomosis of the internal mammary and epigastric, to furnish sufficient blood supply to the kidneys for them to fulfil their function. Below the origin of the renals this suggestion may be of service, although the history of Monteiro's case, which lived for eleven days and then died of secondary hæmorrhage, seems to show that such a proceeding is unnecessary, as far as securing collateral circulation is concerned. It may yet be possible to apply a ligature to the aorta by means of the method of B. and B., with success, for aneurisms of the aorta have been cured by compression and on the circulation in the vessel can be occluded by ligation without the risk to the viscera involved in compression through the abdominal wall, it seems justifiable to attempt the ligation in suitable cases, operating by modern methods, the broad soft ligature, and avoiding laceration of the arterial coats. The method of Macewen seems to be safe enough as far as the operation itself is concerned, which consists in irritating the interim of the sack by needles thrust through its walls. I have been able to find a record of but one case, which has been treated by this procedure and cured. Halsted, of Baltimore, writes me that he tried it unsuccessfully in one case.

To conclude, it seems to me, as if aneurisms of the thoracic aorta may be most safely attacked after medical treatment has failed, by the introduction of a small quantity of inelastic wire. Abdominal aneurisms may first be explored through a celiotomy wound, so as to determine their exact nature and relations, after which the

question of treatment will depend on their situation. It may be impossible to use other means than that pointed out for the thoracic variety, or the other methods of temporary or permanent ligation may be resorted to, according to the conditions revealed by the exploration.—Dr. Bristow, in *Brooklyn Med. Jour.*

REMARKS ON GOITRE, WITH REPORT OF CURES.

John Beattie, aged 46, a stonecutter by trade, consulted me in December, 1894, about his eyes. I prescribed the needed glasses, and noticed he had a very large goitre which I took to be a fibro-cystic enlargement of the thyroid gland, from a very cursory examination. There were several cysts, one in the right and two in the left lobe of the gland. I asked why he did not have it treated, and his reply was that he was so discouraged by the failures in the past, he had given up; although it was steadily increasing in size. It had begun about fifteen years previously, as far as he could recollect, and for over twelve years had been a marked deformity. He had tried iodine injections, tapping sac with an aspirator, the constant current and, as he expressed it, the "electric needle."

On June 27, 1895, he returned and asked me what could be done with the goitre, as it was becoming an impediment to respiration because of compression of the windpipe. Having had very satisfactory results with iodide of potassium by cataphoresis in goitrous cases, I commenced treatment with this plan. Up to Wednesday, July 17, I had used cataphoresis twelve times, with some slight diminution of the tumor and improvement to respiration. On July 17, I opened the central cyst at the bottom, and drained off a quantity of dark-brownish, muddy fluid, similar to what is seen in ovarian cysts, etc. The sac was washed out until the returning liquid was clear and a small quantity of iodine injected. The opening was kept free by packing with gauze. For several days the sac was washed out and packed daily, with considerable improvement.

On July 27, I cut into the left cyst from the top and passed the knife across and out at the opening made in the lower part of the central cyst, which was followed by a discharge of the same fluid and venous hæmorrhage. Iodine was injected and a silver drainage wire was inserted, entering one opening and out through the other; antiseptic gause was packed into the cyst. The next day he was unable to come to my office, being confined to bed. He was visited twice daily, and the sac was washed out with peroxide of hydrogen and bichloride of mercury.

On the 31st, his neck was enormously swelled, especially on the right side, all the lymphatics being involved, and deglutition was almost entirely arrested. I at once cut into the right cyst and drew off a great quantity of fluid. This sac was connected with the others and a drainage wire, with packing, inserted. Every day the sacs were washed out, disinfected and packed. Quinine and stimulants were used internally. On August 4 his temperature rose to 104°, pulse 126; and on the 5th and 6th, 101°; and in a few days normal. He was put on iodine of potash, which was increased to 60 grains three times a day. By September his neck was reduced almost to its normal size. Some little thickening of the parenchyma of the gland remained, although the cyst had entirely disappeared. For this, cataphoresis was continued, and you saw his conditions two weeks ago, when he presented himself to this Academy. From wearing a 17 inch collar, he was wearing a 14½ inch. The contour of the neck was perfectly natural. The thyroid cartilage was prominently defined and, with the exception of the scars of the incision, there was little or no sign of trouble of the thyroid gland.

The above case is an interesting one in its results, and on account of the prominence which the thyroid gland has assumed in medical journals the last year or so, especially in relation to the use of the extract of the thyroid glands of animals in the treatment of myxedema; although the subject of goitre itself seems to have received but little attention. I find, in looking over the medical journals of the last year or so, that very little is said in relation to this matter; most references to the thyroid gland being in connection with the treatment of myxœdema. Goitre, however, whilst receiving but a short chapter in most text-books on surgery, is a subject of considerable importance. We have different troubles of the thyroid gland, such as acute thyroiditis; bronchocele, or goitre of different forms, such as follicular, fibrous, fibro-cystic and cystic; and that peculiar complex of symptoms known as exophthalmic goitre.

I have no doubt that the reason that we only occasionally find writings upon this subject in the regular medical journals is due to the lack of knowledge of the functions of the thyroid gland, and the difficulty of explaining etiologically the various changes that take place. Some recent investigations into the functions of the gland by Hurthle, Eulenberg and others, may result in a better understanding of the pathological alterations. Hurthle reports that the colloid substance in the follicles is produced by the protoplasm in the epithelial cells, and that the secretion of the gland consists in the formation of this colloid substance. It is supposed that pathological changes in the gland are due to some deterioration of this normal secretion. Probably some evidence of this is found in the fact that the same

treatment (the use of thyroid extract, for example) decreases the enlarged gland and improves the bad results which come from the absence of it, such as myxœdema. Another corroboration, probably, is the well known fact that cretinism is found in connection with both hypertrophy and atrophy of the gland.

Eulenberg thinks that the constitutional symptoms of exophthalmic goitre may be the direct toxic effects of absorption into the veins of the increased altered secretion of the follicles, which produces chemical changes in the constitution of the blood. If this theory is correct, the nervous origin of exophthalmic goitre must be discarded. That it is tenable is shown by the fact that nearly the same symptoms are produced by the artificial introduction of thyroid secretion in excess. But these theories in regard to the etiology of the pathological changes of the thyroid gland are somewhat speculative as yet, and require further investigation and confirmation.

The treatment of troubles of the thyroid has lately received considerable impetus. We might divide it into medical, electrical and operative.

Medical.—The medical treatment is by the internal administration of suggested remedies, such as iodide of potash, fluoric acid, thyroid extract, etc., and locally, by the introduction in the substance of the gland of iodine, iodoform, etc. Everyone is familiar with the iodine treatment. It is the oldest and has held its ground longer than any other, with varying success. Probably 90 per cent. of follicular and fibro-cystic goitres are reduced in volume by this treatment, but few radical cures are recorded. Garé of Tübingen reports, however, very great success with the injection of iodoform, one part to seven of oil and ether. Kocher of Berne has used thyroid extract in twelve cases, all of which were improved, some cured. Bruns of Tübingen also tried feeding in twelve cases with fresh calf thyroid. Four or five cases were cured, and the others, with the exception of three, much improved.

Electrical.—Under this heading I would include three methods of using electricity. First, galvanizing, by passing the continuous current through the gland, both poles being on the tumor; second, by electrolysis; and third, by cataphoresis. With the use of the constant current I have had little or no experience. It has been suggested for the reduction of the different kinds of glandular enlargements, and has been used with varying success. Electrolysis I have used in follicular and fibrous goitre. The negative pole is generally passed into the growth and a current of ten milliampères is turned on and continued for about five or ten minutes. This can be repeated in from three days to a week, according to the amount of irritation set up, the strength of the current being increased until we can use as much as forty or fifty milliampères. Gradually a reduction of the growth takes place under this treatment, and a number of cures are recorded as its result. It is of very little service, however, in cystic goitre, because we cannot get the effect of the negative pole in the alteration of the tissue of the growth as we do in the more solid tumors. It has been suggested to tap the cyst, wash it out, fill it to distension with chloride of sodium solution, and by this means receive the full effects. With electrolysis from four or five to a dozen or more sittings are required.

Cataphoresis.—The third method, that of cataphoresis or the introduction of remedies by the direction of the electric current, has been in my hands a very satisfactory treatment, particularly in follicular goitre. I can record two or theee cases in the last eighteen months where I have had the most satisfactory results from the use of iodide of potash by this method. I use, attached to the positive pole, a metal disc, which is covered with wet chamois or cotton, upon which is packed as much powdered iodide of potash as it will hold. This is covered over with a thin pledget of wet cotton and applied to the growth. The negative pole is held in the hand, or applied to the back of the neck, or between the shoulder blades. I have seen very little notice of this method of treatment. The only case that I know of recorded was one reported by Dr. McGuire two or three years ago, in the *Virginia Medical Monthly.*

In the goitrous enlargement or bronchocele, which one observes in young people, young girls especially, about the time of puberty, I do not know any more satisfactory treatment. It is true that this form of bronchocele occasionally manifests itself only at the time, or during the period of menstruation, and very frequently gets well of itself. I am not, however, referring to this form, but to those cases of persistent enlargement of the gland, which not only is seen during the menstrual period, but is present more or less all the time until active measures are instituted for its relief. I have seen cases of follicular bronchocele that have become very large in women because no attention was paid to it in the stage where it would swell up and go down, as it were, on the theory that it would get well of itself. One of these was very large, and persisted for several years, and was cured by the application of iodide of potash by cataphoresis. This case I have already mentioned, and it is one known to most of you. I am satisfied that further investigation into this method of applying remedies will show it to be of great value. In regard to operation, I am satisfied that in cutting open the cysts, as I did in the case above recorded, that I was exposing this patient to as great danger as if I had removed part of the gland. This was evidenced by the symptoms that developed.

Partial thyroidectomy, or strumectomy, as some call it, is recommended by many authors for follicular and fibrous goitre. Strom of Christiania has reported quite a number of operations with success. He also advises enucleation of the cyst for cystic goitre.

Morris, in the *Lancet*, January 5, 1895, reports two cases of multiple cyst of the thyroid gland, such as the case before reported, in which he also practiced incision with satisfactory success.

Marsh, in the *Birmingham Medical Review*, reports five cases of bronchocele operated on for urgent pressure symptoms (all the cases being of comparatively short duration), in which he had good results, and he advises removal of the isthmus and as much of the lateral lobes as may be needed to relieve pressure, which is followed by atrophy of the rest of the gland.

Brooks reports two cases of partial thyroidectomy followed by success.

Operation has also been suggested and performed by quite a number of authors for exophthalmic goitre on the ground that it is a hyperplasia of the gland structure, and that the nervous symptoms are due to the toxic effects of the altered secretions, and a number of cures are reported. Greenfield's article in the *British Medical Journal*, December, 1893, is probably the best of these contributions. All operators, however, have come to one conclusion, that complete removal of the gland is unjustifiable, and that all operations are more or less dangerous, death on the table having resulted in a number of cases from collapse. It is doubtful that any deaths have resulted from hæmorrhage, although in some cases the bleeding is hard to control because of the difficulty of applying ligatures to the vessels, whose walls are in such a condition that ligatures will tear loose. To arrest the bleeding by packing is not satisfactory and may be dangerous. I have no doubt that during operations on the thyroid gland some of the fatal results were due to prolonged pressure on the pneumogastric nerve. If proper care is taken in performing the operation, the bleeding arrested as the operation proceeds, and the field kept as aseptic as possible, I believe the operation of partial thyroidectomy would be comparatively safe. Care must also be taken not to injure the recurrent laryngeal nerve. This operation has been successful in a great many instances, but there have been some failures, as is the case with all operations in surgery.—J. A. White, in *Maryland Med. Jour.*

Iodine was discovered in 1812 by Courtois. It is found in several marine plants, and extracted by a simple process. Its use in medicine is said to date from about 1825, when it was first employed in the hospitals of London and Paris.

CHRONIC HYPERTROPHY OF THE PROSTATE GLAND.

This disease or pathological condition is essentially seen in the last half of life, rarely before the person reaches the age of fifty, and it with its consequences has carried to the grave many useful citizens whose lives might have been lengthened had the properly directed efforts been observed. Until recently it has been a disease of *noli me tangere*, but, thanks to the ingenuity of Dr. J. Wm. White, we have now at our command a means by which the enemy can be conquered and our old men afforded relief from their suffering and their lives prolonged.

Sir Henry Thompson found that one man in every three over fifty-four years of age, examined after death, showed some enlargement of the prostate; one in every seven had some degree of obstruction present, while one in every fifteen had sufficient enlargement to demand some form of treatment.

Coming on insidiously, as it does, our patient is unconscious of its existence until some sympathetic condition arises to call our attention to it.

What, then, is hypertrophy of the prostate gland? What its morbid anatomy? It is the development of circumscribed tumors in the fibro-muscular tissues and atrophy of the glandular structure to such an extent at times to convert the prostate into a homogeneous mass of fibro-muscular tissue. The development may be central, unilateral or bilateral, with no positive limit as to size or shape. Thompson has seen it $4\frac{1}{2}$ inches in transverse diameter, and 12 ounces in weight has been reached.

The part most frequently involved is the posterior median part, or "third lobe," as it is improperly termed, when it is known as centric median hypertrophy, and constitutes one form of bar at the neck of the bladder, first described by Guthrie in 1836, in his work on the "Anatomy and Diseases of the Urinary and Sexual Organs."

The etiology of this condition is yet unknown, and the numerous hypotheses advanced by scientific men do not cover the ground, and need not be discussed in this paper. It is not excessive use of the organ, for it occurs in very temperate men, nor can it be attributed to sedentary habits, nor active habits, for it is found in both classes of men; it is not due to venous stasis, for this is a sequence to the disease.

From its analogy to the uterus in its anatomical construction, it corresponds with that organ in the tendency to the development of fibroid tumors. I am inclined to the opinion that the colored man is more liable to the development of these fibro-myomas, as is the case with the

colored female. I can find no statistics to verify my report.

Distortion and elongation of the prostatic urethra, decrease in its calibre, elevation of the vesico-urethral orifice, and increased venous stasis, are some of the primary pathological conditions in hypertrophy of the prostate, and as a result of these we find decrease in the expulsive power of the bladder, residual urine, slight catarrhal inflammation of the bladder, with a frequency of urination, and later, after a few years, there is formed: 1st, Dilatation of the bladder, with increased residual urine; 2nd, Hypertrophy of the muscular coat and development of muscular bands and intervening sacculations; 3rd, Dilatation of ureters and pelves of the kidneys and stagnation of urine in them; 4th, Ammoniacal fermentation of urine and general congestion of the entire urinary tract; 5th, Septic inflammation, extending to the kidneys; and, 6th, Death from uræmia, induced by rough handling of uncleanly instruments, where there has been retention and general congestion.

The symptoms of this complaint vary with the extent of the disease. Among the earliest are feebleness in starting the stream, undue frequent nightly calls to pass water, and an irritable bladder, with a mild form of uræmia with its accompanying indigestion, nausea, loss of appetite and polyuria, sometimes called diabetes insipidus to cover ignorance.

The diagnosis of prostatic hypertrophy is comparatively an easy matter, with these symptoms before us.

The surgeon's forefinger, well oiled and gently introduced into the rectum, comes in contact with the prostate on the anterior rectal wall. Here examine carefully its size, contour, firmness, and regularity of surface. Undue deviation in size, firmness, etc., is an indication of the existence of prostatic disease.

But dependence on the rectal surface alone is unreliable, although an adjuvant, as it is the vesical surface that provokes the vesical symptoms. In addition to the symptoms given above, the skilful manipulation of the sound, assisted by the finger in the rectum, noticing the direction the point of the sound takes, the mobility of the point in the prostatic urethra and ease with which it is introduced, will greatly aid us in our diagnosis. Then further search for residual urine by means of a catheter, which, if found, will confirm our diagnosis. The cystoscope is of little use in diagnosis, on account of our inability to pass it through the distorted urethra.

Now exclude urethral stricture, cancer of the prostate, calculus, tuberculosis, degeneration and sclerosis of the bladder-wall, and our diagnosis is complete.

The prognosis in prostatic hypertrophy under the ordinary means of treatment is unfavorable, and the disease can only be palliated and symptoms treated; but since the introduction of the operation of castration for its relief, our prognosis is more favorable. No routine treatment can be prescribed, the requirements varying with each case. Our resources for meeting the needs of different cases may be either palliative (medical) or surgical, or both.

Palliative or Medical. — 1st. Relieving the venous stasis of the prostate and bladder by proper diet and proper exercise, massage of the prostate *per rectum*, assisted by a sound to the urethra and complete evacuation of the bladder by means of a clean catheter every ten to twelve hours as the case may require; while internally, laxatives, ergotine, and strychnine are certainly useful.

2nd. Where cystitis exists, daily irrigation of the bladder and prostatic urethra with a solution of permanganate of potassium, 1-5000, 1-3000, 1-2000, allowing three ounces to remain in the bladder for an hour or longer.

3rd. Where there is distortion and elongation of the prostatic urethra from bilateral hypertrophy, large sounds or special dilators will aid in the treatment. But these should be used with caution, never forgetting that we are handling an old man, whose vital forces are on the decline and whose recuperative powers are not those of youth. The danger of provoking uræmia with the first use of the catheter or sound is not to be forgotten at any time. To combat septic inflammation in the bladder we have other means at hand; only the following may be mentioned, viz.: Hot water, nitrate of silver, bichloride of mercury 1-1000, boroglyceride, besides the one mentioned above.

Like many other pathological conditions, prostatic hypertrophy has called forth the ingenuity of surgeons, by which a number of surgical procedures have been devised to accomplish some relief for suffering senility.

The severity and danger of some operations have been sufficient to condemn them, while the objection to emasculation has caused many patients to reject the requests of their physicians, they preferring to continue in their suffering rather than submit to the operation.

Prostatectomy, both by the perineal and suprapubic methods, was for a time recommended by the profession, but the difficulties encountered in their performance, the danger of hæmorrhage, which cannot be controlled during the operation, the high mortality and the prolonged anæsthesia which is necessary, have been sufficient to cause surgeons to drop them for more rational means. By means of the combined suprapubic and perineal method the circumscribed tumors are more easily enucleated, but it is an operation of gravity

and would be contraindicated in those very cases in which the demand for relief is most desired. And, too, it has been shown that aside from the danger of the operation, it is little better than the palliative measure requiring the frequent use of the sound for many months after.

Dr. Dittel, of Vienna, has removed the whole gland in four cases with one recovery, and very satisfactory results in that case.

Simultaneous ligation of both internal iliac arteries for this complaint (after Bier's method) was done some time since by Dr. Willy Myer, in a man 55 years of age, with very satisfactory results. Six months after the prostate was almost normal in size, and the length of the urethra was reduced from 23 to 21½ centimetres, although there still remained 10 to 24 ounces of residual urine in the bladder, but the patient could urinate at will, which he was unable to do previously. He prefers the double extra-peritoneal incision to Bier's single incision, as old men do not bear intraperitoneal interference as well as young men.

Dr. J. Ewing Mears, in a paper read before the Philadelphia Academy of Surgery, advised the ligation of the spermatic cords for prostatic hypertrophy. He considers it as efficacious and more desirable than the removal of the testes.

In 1892 Dr. J. W. White caused his assistant to do a series of operations for castration upon dogs, with a view of ascertaining the effect of such upon the prostate gland. The results showed rapid atrophy, first of the glandular, and later the muscular structures. He found the average weight of the prostate of a dog to be 35.5 grams. This suggestion of Dr. White's induced other physicians to try the operation upon their senile friends suffering with prostatic hypertrophy. Dr. Ramm, of Christiana, Norway, being the first in Europe, and Dr. Haynes, of Los Angeles, Cal., the first in this country to do the operation successfully. Dr. White followed with three cases, and then a long line of others. The journals are now full of reports of successful cases, and many are favoring it. Dr. White regards the operation as one of the greatest contributions to modern surgery, and has performed it a number of times with satisfactory results.

The effect on the inflamed bladder is immediate and positive, frequently the patient who has been using the catheter for years is able to micturate naturally. The sense of comfort afforded the patient in the prolongation of the interval between the acts of micturition, and especially at night where the interruptions have been hourly, the unbroken rest, the diminished cystitis, the increased muscular control of the bladder, the diminished residual urine, are a few points in favor of the operation. Also the operation can be done by means of a local anæsthetic, if a general anæsthetic is contra-indicated, as is frequently the case in old men, and on account of its simplicity, the patient is not subjected to the long confinement required by the more hazardous operations, prostatectomy or ligation of the internal iliacs.

There is no danger of provoking uræmia, and hæmorrhage is practically *nil*, in castration, which is not the case with either of the other operations. With the testicles already, or soon to become, functionless, and with a contemplation of a long period of suffering, gradually shortening his life, and to be relieved only by death, sentimental objections pale into insignificance and the problem of securing relief without subjecting our patient to a hazardous operation is the only one for our consideration. This is no longer an experiment. Statistics verify the usefulness and certainty of the operation. It stands out as one of the most successful of all operative procedures, and may be considered a specific for hypertrophy of the prostate gland.

But here let me add that due caution and precision in diagnosis is very necessary lest we become too bold in cutting and probably cut the wrong man.—*Nashville Jour. of Med. and Surg.*

DEATHS UNDER CHLOROFORM.

In the first case upon which we comment, which occured on September 11th, the patient was a woman aged fifty-four, who was admitted into the Greenwich Infirmary to undergo an abdominal section. She was carefully prepared for the operation. She was a chronic alcoholic, but physical examination revealed no organic disease. Chloroform was given from folded lint, the chin being supported by the ring finger and the little finger. Old iritis rendered the right pupil irregular; the left was observed to be small and to react to light. At first the patient held her breath, and there was some struggling. The pulse was watched, and was fairly strong and regular. Seven minutes after chloroform was commenced she ceased to talk, and conjunctival reflex went. The breathing was regular. The lint was now withdrawn and not reapplied. Immediately after this, before the operation was commenced, the breathing became stertorous and the face became livid. The tongue was now drawn forward and the chin further up, but the lividity increased, and, although artificial respiration was practised and vensection performed, the patient only gave five or six irregular respirations and then died. Inversion, cardiac acupuncture, nitrite of amyl inhalations, injections of strychnine and of ether were also tried. Two drachms of Duncan and Flockhart's chloroform were used, a little being dropped on either face of the lint alternately. The necropsy showed extensive fatty changes in the myocardium and engorgement of the viscera and meninges with dark

fluid blood. The medical men present regarded the death as due to asphyxia, a conclusion which the details given above lead to. The reason for the overdose does not seem so clear. The use of lint is open to the objection that it is almost impossible to maintain an equable atmosphere of chloroform with it, as each time chloroform is dropped on the patient for the moment includes a higher percentage vapour. It is possible, if the chin had not been held up from the first stertor would have appeared earlier in the case, and so have given warning before the nerve centres had become so deeply narcotised. The name of the administrator of the chloroform is not stated. Another death is reported as having occurred under chloroform at the new Somerset Hospital' Cape Town. The patient, a man aged thirty, was admitted to have an operation performed on his finger. Chloroform was given by Dr. Hofmeyer, the assistant medical officer to the institution, after the patient's chest had been carefully examined. The operation was completed when the patient was noticed to be breathing badly. Half an ounce of chloroform was given from "a mask held near the face." The patient struggled a good deal in going under. When respiration grew embarrassed the pupils dilated and the face grew livid. The post-mortem appearances of fatty visceral changes were present. It was thought that the death was due to syncope. A battery was used over the precordial region and artificial respiration kept up for a long time. This case resembles the one given above, and appears to be one of asphyxia—probably in each case the stage of struggling led to the intake of an overdose of chloroform. The third case we have already briefly noticed, but further particulars have since reached us through the courtesy of Mr. Richard Coates, the house surgeon at the Newport Infirmary. The patient, a man aged forty-seven, was admitted for the performance of a trivial operation on his finger. He had previously taken chloroform well for a similar operation. Having been duly prepared and physical examination showing him free from valvular disease of the heart, although the heart's action was weak, he was given chloroform by dropping it continuously on a towel rolled into a cone. The man was very nervous and apprehensive of the anæsthetic. After two minutes of inhalation he struggled, and an opisthotonic spasm occurred lasting half a minute. During this time no air entered the chest. When the spasm had passed, chloroform was again given, but with great caution. The breathing was now quiet, and the corneal reflex disappeared. The bandage was removed from the hand, when the man suddenly grew pale and then livid. The tongue was drawn forward, the mouth being kept open by the use of a gag, and the head depressed. Artificial respiration was commenced at once, and maintained for three-quarters of an hour, while nitrite of amyl inhalations were given. Air entered the chest freely; the pupils were of medium size, but no heart movements could be detected. About three drachms of Duncan and Flockhart's chloroform were used. Death was undoubtedly due, says Mr. Coates, to "primary heart failure." The heart muscle was found to be fatty. A death under chloroform is further reported from the Oldham Infirmary. The patient, a woman aged forty-three, was admitted to undergo excision of her right maxilla for the relief of cancer. The patient was examined and nothing found which was held to contra-indicate the giving of chloroform. The gentleman who was acting as junior house surgeon, gave choloform, first from lint and then through a nasal tube (catheter in nostril) attached to Junker's chloroform inhaler. Conjunctival reflex had disappeared when this change was effected. The operation was commenced, but the patient winced. The nasal tube was withdrawn and lint reapplied, but it was noticed that the patient had ceased to breath. Artificial respiration was carried on for forty minutes, and faradisation of the phrenic nerves and hypodermic injections were tried in vain. The coroner is reported to have said that while not depreciating the skill of the gentleman who gave the chloroform, he thought in such cases an experienced surgeon should give the chloroform. Unquestionably this case is an instance of operation shock killing through an incomplete anæsthesia acting upon an enfeebled heart. The necropsy revealed marked fatty degeneration.—*Lancet.*

PAPAIN IN CHRONIC GASTRIC ULCER.

Dr. Guthrie Rankin communicates to the *Lancet* a series of ten cases of gastric ulcer treated with great benefit, and in nearly all with curative results, by papin, iron and cannabis indica, administered in pill form. The results were so striking as to make it probable that in such a combination of remedies we have a powerful and useful weapon with which to combat a very intractable disease, and one which, perhaps more than most others, impairs the usefulness of the unfortunate victim and renders his or her life a burden. In all this series, putting on one side the difference of detail required by the idiosyncrasies of each, the plan of treatment has consisted in the exhibition of a mixture of iron, papain and cannabis indica, generally in pill form, and with varying quantities of each of the ingredients. As the large proportion of such ulcerations occur in anæmic patients the *raison d'etre* of the iron is manifest. It may be that in some cases iron is not indicated at all by the existence of any appreciable anæmia; but even then it is probable that the blood is impoverished in some degree, and that the hæmatinic

properties of the drug not only restore this depreciation of quality but also, in a secondary way, promote the healing process at the site of lesion. The cannabis indica is useful as a sedative to the stomach walls, as a controller of its muscular action, and as a prop to its nerve-supply, while it is also fully recognized as a direct promoter of appetite. Lastly, papain, which is the most important of the three, has propably a complex effect on the curative process. It is well known that when a solution of papain is painted over a fissured or ulcerated tongue it rapidly provokes cicatrization. The drug is also of value as a speedy solvent of dead tissue, and to some extent it is credited with antiseptic and tonic properties. Its great use, however, medicinally has hitherto been as a digestive ferment, and its activity in this respect would seem to exceed that of pepsin, pancreatin, or any other known agent. If all these powers of papin be admitted it is easy to conceive a reasonable hypothesis to explain the happy results afforded by it in cases of gastric ulcer, particularly when it is combined with other drugs, such as those indicated, which by their collateral effect assist and intensify its action.

It would seem doubtful whether many cases of so-called irritative dyspepsia may not in reality be due to this definite lesson of the mucous membrane in a latent condition. Hæmatemesis is not necessarily present in every case of even acknowledged gastric ulcer, and in its absence it must always be a matter of difficulty to decide whether the train of symptoms owes its cause to a simple catarrh or to organic change in the substance of the stomach wall. The occurrence of hæmorrhage clinches the diagnosis; but where remedies, useful in cases about which by reason of the hæmatemesis there can be no doubt, give equally good results in allied cases which fall short of the confirmatory evidence afforded by the bleeding, we may assume that such cases may owe their symptoms either to an early stage of the same condition or to an accomplished lesion of the surface so chronic and indurated as to prevent actual loss of blood. By some observers the persistence of pain in patients who have admittedly suffered from gastric ulcer has been ascribed to imperfect movement of the stomach walls consequent upon interference of he resulting cicatrix; but the histories of four cases in the series would rather indicate either imperfect healing or the occurrence of another patch of ulceration as the more probable explanation of the continuance of this symptom,—*Pacific Med. Jour.*

Serumtherapy. — Schaeffer *(Archive générale de Médecine*, August, 1895, and *British Medical Journal)* discusses the present position of the serum treatment, after referring to the researches upon which it has been built up.

(1) *Tuberculosis.*—Richet and Héricourt were the first to treat the disease with serum obtained from refractory animals, but up to the present moment no very good results have been obtained.

(2) *Rabies.*—Serum treatment does not appear to have a great future, as immunization by intensive vaccination gives greater success.

(3) *Pneumonia.*—After referring to the investigations, the author observes that the serum treatment deserves to be considered. The reason that it has not been more generally adopted is probably on account of the difficulty of obtaining the serum from immunized rabbits.

(4) *Enteric Fever.*—Here the clinical application of laboratory facts has not given any very good results. This may be partly due to the length of time between the penetration of the poison and the treatment, and partly possibly owing to mixed infectious.

(5) *Typhus.* — The injection of serum from patients who had suffered from typhus was adopted with good results by Legrain in an epidemic in Algiers.

(6) *Cholera.* — The cholera peritonitis of animals is very different from cholera in man. Behring recently announced that he had obtained a curative serum, but the results have not yet been published.

(7) *Syphilis.*—The serum from the dog and lamb have been employed, and sometimes with good results.

(8) *Streptococcus Infection.*—Animals have been vaccinated against this infection. The serum so obtained has been used in puerperal fever with good results. It has also been employed in erysipelas and angina.

(9) *Cancer.*—The results as yet obtained are insufficient to carry conviction.

(10) *Tetanus.* — Well-marked tetanus is very difficult to cure in animals, and thus it is not to be wondered at that the results obtained in man are not conclusive. The serum, however, provides a valuable prophylactic against tetanus.

(11) *Diphtheria.*—It is in this disease that the serum treatment has registered its greatest triumphs. Where mixed infections exist the results have naturally not been so favorable. The slight accidents caused by the treatment are to be disregarded in view of its remarkable efficacy.

The author then refers to the successful application of the serum treatment to snake-bites. The general results thus far obtained by the serumtherapy promise a successful future for this new method of treatment.—*Univ. Med. Mag.*

Is Colour-Blindness a Case of Atavism. — A recent writer, M. Dubois, throws out a suggestion that will probably be new to most of our readers. It is recognised by astronomers that there are three classes of stars—first, the bluish-white stars, of which Sirius and Regulus are ex-

amples. More than half of all known stars belong to this class. In these stars combustion is at its maximum, and their atmosphere consists of superheated hydrogen and certain metallic vapours. The second class, or yellow stars, has for typical representatives Capella and our own sun. They are less hot than the first class, and the hydrogen lines in their spectrum are not so conspicuous as in the case of the white stars. This class contains about 33·5 per cent of all known stars. The third class are the red stars, and of these Betelgeux is the representative. They are in a later stage of cooling than the second class, and the violet rays are deficient. This class includes about 8 per cent. of known stars. From these known facts it is conjectured that colour-blindness (or insusceptibility to the red rays of light) may possibly be a case of atavism—a "negative inheritance from that time long ago when the eye of our ancestors was not yet sensitive to red rays, which were almost entirely wanting in the white stage of the sun." This is a startling theory, but it suggests a plausible explanation of what is such a mysterious fact—viz., that colour-blindness should so uniformly take the form of insusceptibility to the red rays. Atavism is without doubt a principle of wide application, and may be fairly relied upon to explain many apparently inexplicable facts. We will not venture to pronounce upon the correctness of its application in the present instance, but at least the theory is a bold and ingenious one, and, if accepted, would tend towards that unifying of knowledge which is the aim of science. Colour-blindness, regarded as an isolated phenomenon, is mysterious, but if it be a case of atavism it takes its place in the scheme of ordered knowledge.—*Ed. Lancet.*

New and Speedy Method of Dilating a Rigid Os in Parturition.—At a meeting of the Obstetrical Society of London, Doctor Farrar (Gainsborough) gave the details of two cases in which he had used a ten per cent. solution of cocaine as an application to the rigid os. In one case he had applied the cocaine after endeavoring vainly to relax the cervix by means of chloral, bromide of potassium and morphia, and the most persistent attempts at digital and mechanical dilatation, with and without chloroform. He decided upon incising the os, and used the cocaine to this end. After five minutes he introduced the finger as a guide to the scissors, and, to his surprise, found the os widely dilated. In the second case, a primipara, forty-eight years of age, he used every effort, as before, to produce relaxation, and waited three days before making the application of cocaine, which was immediately successful. In four minutes the os had yielded. He considered the dilatation to be due to the cocaine in both cases. Doctor Armand Routh said that Doctor Dibbs, of Shankin, had recommended cocaine as relieving the pains of the first stage of labor, and that Mr. Head Moore advised cocaine and boric acid pessaries in cases of rigid os. He himself had found it useful. The president, Doctor G. E. Herman, said that two cases were rather a slender foundation upon which to base a conclusion, but if Doctor Farrar's results were confirmed by further experience, he would have made a valuable addition to our obstretric resources.—*The Lancet.*

Treatment of Chronic Hydrocephalus.—Dr. Raczynski concludes as follows with regard to the value of punctures in chronic hydrocephalus: 1. Puncture is not a dangerous procedure, if carried out under antiseptic precautions, and if the fluid is evacuated in small quantities at intervals of several weeks. 2. The employment of permanent drainage is more dangerous than evacuation of the fluid by puncture or even aspiration. 3. Although the results thus far obtained have not been brilliant, the statistics will improve when the operation is resorted to at an earlier stage, before much thinning of the brain substance has occurred. The most difficult question to decide is in what cases and at what period an operation is to be undertaken. It is known that some cases of hydrocephalus get well spontaneously, while others, with marked enlargement of the head, live for many years; on the other hand, if left to itself, the disease often gives rise to the most unfortunate results. By interfering too early the surgeon exposes himself to the reproach of having performed a perhaps harmless, but unnecessary operation; while by delaying it may be inefficient. According to the author's opinion, puncture is indicated in those cases in which in a previously healthy child symptoms of hydrocephalus rapidly develop; if a progressive enlargement of the head is distinctly noticeable; if marked bodily or mental impairment be threatened, in short; if we have everything to gain and nothing to lose.—*Oest. ung. Centralbl. f. d. Med. Wissench.; Internal. Jour. of Surg.*

"The meanest man I know of lives in Kansas," said a St. Louis physician. "He is a farmer, worth a cool hundred thousand. His wife was taken suddenly ill, and he came to town to consult me about her case. I told him that I could not prescribe intelligently without seeing the patient, but he declined to incur the expense of a visit. I charged him $1 for the prescription, and he spent half an hour trying to beat me down to 90 cents. He made me write the prescription in English, then bought the drugs and compounded it himself to save the apothecary's fee. One of the ingredients was capsicum. He thought he had some at home, but was mistaken, and had to come back to town, a distance of four miles, for

it. By the time he had succeeded in saving about 20 cents, and wasting $2 worth of times, his wife was dead and the medicine a loss on his hands. That so wore on him that he fell ill. He took the medicine prepared for his wife, but that only aggravated his malady. When he finally recovered he sued me for $10,000, and was beaten and had to pay costs. He then went before the Grand Jury and tried to have me indicted for malpractice."

This man is about on a par with the fellow who takes a medical journal for several years, and when asked to pay for it drops it back in the office and has it marked "Refused."—*Times and Register.*

In the March number of the *London Medical Recorder* appears the following article, commendatory of a well-known American product: "Listerine is an antiseptic and deodorizing preparation which has for many years been a favorite with American surgeons. Its qualities are due to the essential antiseptic constituents of thyme, eucalyptus, baptisia, gaultheria and mentha arvensis, in combination with which is associated a stated quantity of benzo-boracic acid. Experience points to its reliability in obtaining that condition of asepsis which is the ideal of every surgeon, and it has the distinct advantage of being fragrant and non-poisonous. It does not coagulate serous albumen, and it is thus free from the drawback which so markedly limits the action of such agents as corrosive sublimate, most of which are, moreover, extremely poisonous. Listerine, then, is an agreeable and powerful antiseptic and deodorizer, well adapted for ordinary surgical work, available for internal administration, and useful for gargles, mouth washes and lotions, for which purpose it may be employed without hesitation, seeing that no mishap can occur, even in unskilled hands."

EXTERNAL APPLICATON OF GUAIACOL IN ORCHITIS.—Pietro Pucci (*Gazz. d. Ospedali*) reports the case of a man, aged 66, who had suffered from repeated attacks of ague. Inflammation of both testicles suddenly came on without any apparent cause, and this was followed within two or three days by an acute attack of malarial fever. Sulphate of quinine was given for a week without any effect on the fever, while belladonna was applied to the testicles, equally to no purpose. An ointment composed of 2 g. of guaiacol and 20 g. of vaseline was then prescribed, about 2 g. of it being painted over the scrotum thrice daily, and the quinine being discontinued. The result was that the fever was almost at once subdued, and the orchitis was entirely cured in a week. The immediate effect of the guaiacol was an intense burning sensation at the place where it was applied. This lasted about ten minutes, but half an hour after the application the pain was distinctly mitigated, and finally ceased on the third day of the treatment.—*Med. and Surg. Rep.*

"THE CENTURY MAGAZINE" celebrates its quarter-centennial in its November issue with an "Anniversary Number." The programme that has been arranged for the coming year contains a number of interesting features. Much has already been written concerning Mrs. Humphrey Ward's new novel, "Sir George Tressady," which has been secured for its pages. It begins in the November number with an account of an English parliamentary election. Other and shorter novels are contributed by W. D. Howells, F. Hopkinson Smith, Mary Hallock Foote, and Amelia E. Barr. There will also be contributions from Mark Twain and Rudyard Kipling; a series of articles on the great naval engagements of Nelson, by Captain Alfred T. Mahan, author of "Influence of Sea Power upon History"; three brilliant articles on Rome, contributed by Marion Crawford, and superbly illustrated by Castaigne, who made the famous World's Fair pictures in *The Century;* a series of articles by George Kennan, author of "Siberia and the Exile System," on the Mountains and the Mountaineers of the Eastern Caucasus, describing a little-known people; articles by Henry M. Stanley and the late E. J. Glave on Africa; a series of papers on "The Administration of the Cities of the United States," by Dr. Albert Shaw.

Prof. Sloane's "Life of Napoleon," with its wealth of illustration, will reach its most interesting part,—the rise of the conqueror to the height of his power, and his final overthrow and exile. In order that new subscribers may obtain the whole of this monumental work, the publishers have made a rate of $5, for which one can have a year's subscription from November, '95, and all of the numbers for the past twelve months, from the beginning of Prof. Sloane's history.

We will take subscriptions for *The Century* at $4 per year; or in club with the LANCET for $6.

IN reporting the case of a woman suffering from neoplasm in the stomach, Dr. Ernesto Costa, of Alagna, Italy, says:—"One can easily imagine the intense pain which entirely prevented her sleeping. I tried chloral and sulfonal, and although the latter answered fairly well for a time, it soon became necessary to discontinue it. I then administered bromidia, with the following results:

1. It produced refreshing sleep.
2. It soothed the pain, and thus rendered alimentation possible.
3. Although given in frequent, and sometimes in tablespoonful doses, it never produced any nervous or cardiac disturbance."

THE CANADA LANCET

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* DR. J. L. DAVISON, 12 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Letters and Remittances to be addressed to* ARTHUR A. ADAMS, Gen. Business Manager, 11 Colborne Street, Toronto.

AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John N.B.; Canadian Advertising Agency, 60 Watling St London. 5 Rue de la Bourse, Paris.

Editorial.

MATRICULATION IN MEDICINE IN ONTARIO.

In our last issue we referred to the serious aspect of affairs relating to matriculation in medicine in Ontario, pointing out the manner in which intending students are handicapped, before commencing their professional studies proper.

We stated that we should in this number give specific cases of what appears to us grievances to intending students of medicine.

A. B. matriculated in Arts, at Toronto University, in 1889. Passed his first year in 1891. Was refused registration in 1895, though in 1889 his matriculation gave him that privilege.

C. D. was accepted for Senior Matriculation at Toronto University in June, 1892. Passed Departmental examination except in euclid and algebra. These he passed at Toronto University in September. Is now an undergraduate in Arts. His examination included every subject required by the Council, but he was refused registration though his standing in the various subjects was exceptionally high.

E. F. shows certificate from the Registrar of Toronto University, of having matriculated in 1895. Was refused registration.

G. H., Certificate of Junior leaving examination, including chemistry and physics, 1890. Senior leaving departmental, July, 1891. Latin endorsed 1895. Was refused registration.

These are but a few of many similar cases that have come under our notice. Many more could be given, if space permitted, to show that men, mentally well qualified to enter the profession of medicine, are being refused entrance to it, because wanting the specific certificate called for by the Council, equivalents being entirely ignored.

What is a matriculation examination? If anything it is a test of the fitness of a man as regards his preliminary education, to enter upon the special studies of the profession he selects for his life-work. Such being its nature, this examination should have nothing arbitrary about it, as regards the subjects it should include, or the regulations laid down for carrying it out; and we think that equivalents should always be allowed.

It is just because these principles have been ignored, and apparently purposely ignored, that the present heart-burning exists so widely, not only among medical students and their immediate friends, but in a much wider sphere.

Why should university matriculation examinations be ignored? They cover the same ground, and are supposed to be sufficient proof of preliminary education to allow a man to enter special courses of study, as for example, law. If any discrimination as to a preliminary test should obtain between medicine and law, the latter should be the more severe. From it are furnished our judges, counsel, and to a large extent members of both Provincial and Dominion Cabinets; men whose office in life would make an education outside the special study of a profession, most necessary. Yet, as we have stated, these men are considered sufficiently educated when they have matriculated at any of our universities, to begin their special professional studies.

Should not our Universities look to it that their matriculation examinations shall not be thus discredited?

When a man has passed his matriculation examination at a university, and subsequently taken the first year's examination, and then is refused registration in medicine, there is something wrong either with that university, or with the regulations as to registration in medicine. Which is it? The university? We trow not. This must be looked to. As matters stand now, a student might have passed his first, second and third years' examinations at Toronto, or any other University, and still be denied registration with our marvellous Council! What a farce to have such arbitrary and absurd regulations foisted upon our province

by a body of men, the majority of whom who could not now, and never could, have passed an examination, one-half as difficult as the matriculation examinations they ignore.

The action of the Council seems to be in the direction of making the matriculation examinations, and all the circumstances surrounding registration, more and more difficult and arbitrary. It is now almost prohibitive for our best class of men. No one will deny that the cream of our profession to day consists of men who have worked their own way.

This class is, under present regulations, practically excluded. Why should this be? To make a close corporation—a guild of the medical profession?

Certainly the sons of our most wealthy citizens may attain after years, to the required standard, with the especial certificates insisted upon. But everyone knows that in Canada our best men are self-made men, not only in medicine but in all walks of life. Prohibition, we believe, was actually discussed at the Council last June, from the fact that the ground taken was, that an effectual check must be put to the yearly influx of young men into the profession.

Our young men, and many of the best of them, are *forced* out of the province for their professional training Witness, one American college where a large proportion—nearly half the students—are this year from Ontario. Are we in a position to afford such a drainage of brain power?

It seems certain that the regulations will have to be re-arranged, and it would be much better that this should be done by the Council than that the Legislature should be obliged to take the matter in hand.

MORAL DEGENERATION.

It is a well-known fact that the health and strength of a community may be judged by the conditions of its morals, and the morals of the literature of the period. For the mind to be healthy, a like condition of body is necessary, the old maxim, *mens sana in corpore sano*, being a trite recognition of this fact.

When a moral degeneration sets in, the existence, individual and national, is endangered.

As long as ancient Rome had a virtuous and hardy population to draw upon for her legions, her arms were ever victorious and wealth flowed into her coffers; but wealth brought luxury, and luxury in a few generations was followed by effeminacy and moral degeneration, and Rome succumbed to the hardy warriors of the north.

History ever repeats itself, and cautious observant scientists of the present day are viewing with alarm the obvious signs of degeneration so pointed out so skilfully by Max Nordau.

Nowhere is this better seen than in the meretricious, erotic and hysterical literature so fashionable in the larger centres of civilization, going hand-in-hand with the use of narcotic stimulants, and the vice of secret drinking—especially among ladies of the highest station—as every medical man knows.

On every side we see books written by men and women evidently the victims of sexual aberration, demanding in exalted, bombastic language, so ominous to alienists, the withdrawal of the barriers hampering "down-trodden woman," making pleas, not for the elevation of man's morals to a higher standard, but licence for woman to lower hers to the man's.

The "woman who did" smiles brazenly at the "picture of Dorian Gray"; and "Dodo" wearing a "yellow aster" upon her manly breast, looks with pity upon Madame Sarah Grand's "Cow-woman," who has the bad taste to bear children.

There can be no doubt that literature of such a variety is capable of doing untold harm, especially to weak-willed hysterical subjects, already tending to "degeneration."

The remedy must be drastic, and ridicule promises to be most successful.

Cervantes in "Don Quixote" struck a deathblow at knight-errantry, by his delicious wit and cutting satire. Dean Swift in "Gulliver's Travels" also materially benefited his generation.

There are some writers at the present day endeavoring to stem the tide, "A Green Carnation" doing much to overcome the yellow aster. While "The Woman in Lilac," by Lincoln Hunter, a Canadian writer rapidly coming to the front, will undoubtedly, if as widely read as it deserves to be, bring the "shrieking sisterhood" to their senses, if satire, and clever caricature of

the leading heroes and heroines of *fin de siècle* literature has any effect.

LODGE PRACTICE.

We extremely regret that an important and interesting communication from Dr. R. Ferguson, of London, which should have appeared in our last issue, was delayed at the publication office, and did not see the light at our editorial office until after we had gone to press. Fortunately, however, we had knowledge of what our professional brethren of London were doing, and an editorial appeared in line with their views, with which we are heartily in accord. Though it is from an editorial standpoint, somewhat a matter of ancient history, with which the CANADA LANCET does not deal, we give the text of the agreement, signed by all but two or three of the doctors.

"We, the undersigned medical practitioners of the City of London, hereby severally covenant and agree, each with the other, that on and after the 1st day of January, 1896, we will not engage in, or contract our services for, lodges or club practice.

"And we do hereby further severally covenant and agree, each with the other, that any party to this agreement who violates the same will subject himself to the payment of the sum of sixty dollars, as liquidated and ascertained damages for each breach, and that the said sum may be sued for in the name or names of any one or more of the other parties to this agreement, in the First Division Court of the County of Middlesex, the jurisdiction of which Court we hereby admit and consent to; and that upon any sum being recovered in such action, the same shall be applied to whatever object a majority of the parties to this agreement may decide upon.

"It is further agreed and understood that this agreement shall not be binding until it is signed by all the medical practitioners in the City of London.

"In witness whereof, we have hereunto set our hands and seals, this 23rd day of September, 1895.

"Signed, sealed and delivered, in presence of."

This has now been signed by 41 out of 46 doctors in the city.

THE LIMITS OF THE PHYSICIAN'S DUTY TO THE DEPENDENT CLASSES.—James W. Walk, M.D., says, *Am. Med. Surg. Bull.* The physician, a man and a citizen, owes a great duty to civilized society, a duty which is conditioned upon his special knowledge. Acquainted as he is with the important laws of heredity and the reciprocal influence of mental and physical states, the responsibility rests upon him to lead the community in which he lives to a higher civilization and to better modes of life. He should be a teacher of the people, and not only by training men to cure disease but, pre-eminently, a teacher of preventive medicine, that department of our science now almost new, but destined to become its pride and glory.

The question of his duty in regard to medical charities is much less simple. Here also an obligation rests upon him, as, for instance, in cases of sudden accident, etc. But this is a very small part of the so-called "charitable" work now thrust upon the profession. It is the common notion that the doctor should treat, free of charge, all the dependents in his neighborhood, and should also give his services to both public and private institutions. Institutions supported out of the tax-rate are, in no proper sense, charities. Their cost is levied upon all the citizens, in proportion to their taxable wealth, and there is no call for any one to serve them gratuitousiy. All others are paid for sheir services, but the physician is supposed to act from some principle not applicable to other sensible men.

Outside of the institutions supported by public taxes comes the yet wider field of the private charities. In these institutions it is right and fair that physicians should make contributions to them in service, if they see fit, but this right has its limitations. Free medical service to come within the definition of a wise and judicious charity should be rendered to those only who are unable to pay for it. To give it to others involves two wrongs: the first, to the younger men of the medical profession who ought to have turned over to them those patients who are able to pay only small fees; the second, to the community, by the encouragement of pauperism and the undermining of independence.

Twelve years ago a somewhat thorough investigation of the dispensary system of the city of

Philadelphia was made, and quite recently the same ground has been traversed with a similar result by a well-known physician of that place. In thirty-two free dispensaries there were treated in one year one hundred and sixty-one thousand and twenty-nine cases, which was about twenty per cent. of the entire population of the city, or one-fifth of all the people. Carefully compiled statistics show that, in Philadelphia, the actual pauper class does not exceed one per cent. of the population. If medical men do all of this vast work from charitable motives, certainly they need to be converted to a more judicious and discriminating doctrine of charity. If this service is rendered from selfish motives, the advantages derived from this free service have been greatly over-estimated. No medical man should indulge the pleasing delusions that the patient he treats at the dispensaries suppose him to be doing a noble and philanthropic act, and putting them nnder a corresponding obligation. In their view, the accommodation is generally the other way.

The valuable experience that may be gained by dispensary practice is often lost from lack of time to make a really scientific examination.

If, then, the duty of the physician to the dependent classes and also considerations of self-interest demand the restriction of free medical service, it is obvious that the existing system should be radically changed. Efforts made to restrict free aid to the indigent have, thus far, in almost every instance, failed through the opposition of the physicians themselves, who desire to have largely attended clinics. The very enormity of the evil may, however, lead to a powerful revulsion of sentiment, when means will readily be found to discriminate between the poor and those able to pay for treatment.

The Serum Treatment of Malignant Disease.—When Coley's paper upon the cure of malignant tumors, *Ed. Ther. Gaz.*, and particularly sarcomata, as a result of infection with erysipelas, appeared, and when he apparently showed that similar results were at times obtained by injections of sterile products of the erysipelas streptococcus, it seemed that at least modern therapeutics were about to lead to the prevention and cure of the one disease against the extension of which we are as powerless to-day, barring the possibility of more thorough removal, as were our predecessors two hundred years ago. The further development of this method of cure in the production of the serum from animals artificially immunized by erysipelas infection was a natural step and one strictly in accord with modern scientific teaching. Satisfactory results in the treatment of sarcomata by these serum injections have been reported by Coley and Emmerich and Scholl claimed to have cured both sarcomata, and carcinomata. Reports from other surgeons of recognized standing are singularly scanty. It is worthy of note that discredit has been cast upon the cases reported by Emmerich and Scholl by the surgeon in whose wards their experiments were conducted, he holding that their statements of improvements were in some cases premature and in others inaccurate.

Senn, after a brief review of this subject, relates his experience in the *Journal of the American Medical Association*, Vol. xxv., No. 24, 1895. Nine cases are reported, of which six were sarcomata and three carcinomata. The author says that in these cases, after fair trial, the treatment resulted uniformly in failure. The remedy failed to effect even a temporary improvement.

In the discussion which followed the reading of this paper, Dr. Coley stated that since May, 1891, he has treated eighty-four cases of inoperable malignant tumors with the toxins of erysipelas and the bacillus prodigiosus. Of forty-three cases of sarcomata so treated, eleven were successful. One patient has remained well for nearly four years, two for more than two years, and two for one and a half years. One has had a recurrence.

In Philadelphia erysipelas toxins have been tried by a number of surgeons and uniformly without benefit. These toxins can be readily obtained, the application of the method is not difficult, and it is fair to infer that they have been used in many unreported cases. In the interest of science in general, and particularly in the interest of the hopeless cancer patient, it is highly desirable that every case, whether successful or not, should be reported in full detail. At present it looks as though the antitoxin serum treatment of cancer must be ranked with all serum therapy,—*i. e.*, that of tuberculosis, of tetanus, of diphtheria, and of syphilis,—as still in its purely experimental stage.

Faith Healing.—Christian Science (*sic*) not being quite a dead letter among us, the following, *Lancet* will be read with interest.

An inquest was recently held upon the body of a girl aged seventeen, who died in Brixton of acute tuberculosis and peritonitis from a perforating gastric ulcer, having been very ill since last Easter. She had no medical advice because, according to the evidence of the woman in whose house she had stayed, "she had trusted in the Lord to heal her without medical aid." It is useless to point out to people of this cast of mind the falsity of their theological reasoning, but we do think that the legislature, which takes care to prevent people jumping off the Monument or going on to ice too thin to bear their weight, might step in and prevent peculiar people and faith-healers from murdering their children by neglect. We should be the last to deny the power of faith, but, as a recognized authority says," faith without works is dead," and it is a canon of theology that the Almighty works by means, and those means humanity is bound to use. The *New Science Review* for July contains an article entitled "Has Mental Healing any Scientific Basis?" We do not quite understand this question, but we gather from the article that help need not always come from without, but there is a broad field for "auto-suggestion and systematic concentration with happy results." The ways and means to become properly auto-suggestive is as follows: You say mentally to yourself—even mechanically at first—until the habit is formed, "I [the real ego] am well. I am strong. I am pure. I am perfect. I am one with the Divine Spirit of Wholeness." The next step is, "To ensure progress special times and seasons should be set apart for focalized thought and affirmation. . . . At times when the objective world, with all its cares and anxieties, may conveniently be barred out, the full glare of the consciousness is turned upon the divine ideal within, which thereby gradually becomes graphic and ruling." It is evidently quite easy to become a mental healer, but we seem to remember that this prossess is not new. There was once a sect in the Eastern Church called the ———— who by steadily gazing at their navels were at length rewarded with a sight of the light (created or uncreated) which shone at the Transfiguration. This method, we suppose, is what Mr. Henry Wood, the writer of the article in question, calls "keeping company with his inner ideal." However, he does not seem to have much faith in the process he recommends, for he concludes: "As related to illnesses, prevention is the end to be sought, so that in time cures may be unnecessary." If any one by "keeping company with his inner ideal" can cure a gastric ulcer he would be a most valuable addition to our present therapeutic agents.

Thirst After Celiotomy.—This distressing symptom which is so troublesome after operation on the abdomen *should* be overcome by the method of Dr. Wm. Hamistan gives in the *Am. Jour. of Obstetrics.*

The patient should have the usual preparation for celiotomy—*i.e.*, diet, daily baths, cathartics, etc. For three days prior to operation, order the patient to drink one pint of hot water an hour before each meal and on retiring, thus drinking two quarts of water each twenty-four hours, the last pint to be taken three hours before the time set for operating. Do not omit to give the water the day previous to the operation, while the patient is restricted to a limited amount of liquid nourishment and the bowels are being unloaded. We thus restore to the system the large loss of fluid occasioned by the free catharsis, and we have the great satisfaction of seeing our patient pass through the trying ordeal of the first thirty-six hours after operation in comparative comfort, with no thirst, a moist tongue and active renal function, represented by an excretion of from twenty-eight to fifty fluid ounces of urine during the first twenty-four hours, cathetrization being seldom necessary. This is in keeping with the full character of the pulse noted.

The above detail I have recently carried out in twelve cases. To eleven chloroform was administered, to one ether. The time required to complete operation varied from ten to fifty-five minutes. Whether the case was one of sclerotic ovaries or a pus case with universal adhesions of all the pelvic structures, the result has been uniform and highly satisfactory, thirst being allayed and excretion stimulated (a very essential condition to prompt recovery).

I believe this method will prove to be efficient in the hands of abdominal surgeons generally, and I publish it early with all confidence that the

twelve cases I have had will soon be fortified by the reports of many hundreds, and that by it we may avoid a condition that is and has been distressing alike to patient, surgeon and nurse.

Hysteria and, Degeneracy.—At the French Congress of Alienists held in August, *Dublin Med. Jour.*, in the discussion on hysteria in its relations to insanity, Joffroy said, concerning hysteria and mental degeneracy, that these are frequently associated, leading to the suggestion that the one is a modification of the other. Common origin is suspected from a common character. Hysteria and degeneracy will thus be two clinical syndromes due to heredity, and characterized by the penetration of subconscious ideas into the lessened or effaced field of consciousness. From this follow these propositions: Hysteria and degeneracy often coexist in the same patient, and have the same etiology—heredity. They both reveal themselves by an analogous mental degeneracy, and this explains the deformities of character met with in both; and the following are the conclusions of Joffroy:

1. Hysteria is one of the forms of mental degeneracy.

2. In its limits, hysteria is confused with certain degenerative manifestations, without its being possible to fix between them any definite limits.

3. Clinically, the individuality of hysteria should be preserved as much as possible from the other forms of mental degeneracy.

4. Therefore, the term hysterical should be applied only to the phenomena of the complete or partial attack, or to manifestations that are clearly hysterical, like spontaneous somnambulism, or to those directly connected with hysteria.

Nasal Epilepsy.—The fifth nerve is responsible for probably the largest number of reflex disturbances to which the body is liable, and the chief of these reflexes can be traced to the ear, nose, or teeth, *Med. Times.* We have often commented in these columns upon these phenomena, and have from time to time cited published cases. Siethoff has lately reported two cases of reflex epilepsy of nasal origin. Both cases were men, their respective ages being thirty-eight and thirty-three. The first suffered for twenty years with epileptic attacks, the fits growing longer and harder each year. Rhinoscopy showed hypertrophy of the inferior and middle turbinated bodies, and of the crest of the cartilaginous septum. An application of a ten per cent. solution of cocaine averted a threatened fit, and the treatment of the nasal mucous membrane with the galvano-cautery finally caused the complete cessation of the epilepsy. The second case presented many similar points. Slight fits occurred for a long time, getting worse year by year. The attacks were always accompanied by an olfactory aura. The right inferior and middle turbinates were hypertrophied and pressed against the septum, causing entire occlusion of the nostril. The result of treatment was eminently satisfactory. Cases such as these force upon us how defective are our methods after all. We wonder how many cases of epilepsy and other reflex nervous phenomena are being every day treated empirically when a minute's examination might set things right. It is, of course, impossible for every practitioner to be replete with special knowledge—*ars longa, vita brevis est*—and as long as the medical profession continues so disgracefully underpaid, it cannot be expected that every patient will be exhaustively examined with a view to diagnosis.

Fistula in Ano.—The danger of operating for fistula in ano is not so great from hæmorrhage as in operating for piles, *Matthews' Quarterly.* The field is clear and all vessels can be more easily secured. Then pressure can be more easily applied. But a most formidable danger confronts us in the improper division of the sphincter muscle, resulting in incontinence of feces. Should it occur after an operation, the patient will never cease calling down curses upon your head. Whatever may be your eagerness for a quick recovery of your fistulous patient, never divide the sphincter muscle but once at the same sitting. I am more and more convinced that the fault is that we cut too little rather than too much in operating for fistula, yet the injunction should never lead us to cut this important muscle too much.

Then, again, a surgeon may think that a fistulous tract that runs up the mucous membrane for several inches is of small importance and easily divided. Let me warn you against such a procedure. It is accompanied by a great risk of hæmorrhage, and of such nature as would be

difficult to control. Whenever such an operation is deemed necessary, be prepared to *plug* the rectum just as soon as the cut is made, and don't wait to see whether hæmorrhage will result or not. I would never leave the patient before this precaution was taken.

The Waterloo and Wellington Medical Association held their regular meeting in Berlin, on the 8th of November. Dr. Webb, of Waterloo, read a very thorough paper, his subject being "Practical Life Insurance Examinations." He laid special stress upon the necessity of systematic and conscientious examinations. During the discussion the question of fees was brought up, and the dollar fee for lodge work was rather roughly handled.

Dr. Brock, of Guelph, gave notice that he intends introducing a by-law at the next meeting, "That no member of this Association shall examine an applicant for life insurance for a fee less than four dollars."

Dr. Necker's paper, "Report of Cases in Practice," was held over for the next meeting, in Guelph, Friday, 3rd January, 1896.

St. John Ambulance Association.—Lieut.-Gov. Kirkpatrick presided at a meeting in the Canadian Military Institution 25th ult. at which a branch for Ontario of the St. John's Ambulance Association was formed. This society is the ambulance department of the Order of St. John of Jerusalem in England, which has its headquarters at St. John's Gate, Clerkenwell, which is now all that remains of the ancient priory, built in 1504, and recently restored. This order is a revival and continuation of the old Hospitaller Order of Rhodes and Malta. Branches of the order are established in Australia, South Africa, West Indies, Madras, Bombay, Ceylon, Hong Kong, New Zealand and Halifax.

The following officers were elected: President, his Honour the Lieutenant-Governor; Vice-presidents and members of Council, Sir James Grant, K.C.M.G., Ottawa; Senator Gowan, C.M.G., Barrie; Judge Weller, Peterboro'; Sheriff Murton, Hamilton; Rev. Canon Richardson, London; Lieut.-Col. Macdonald, Guelph; H. Corby, M.P., Bellville; Judge Hughes, St. Thomas; Dr. R. T. Walkem, Q.C., Kingston; Wm. Mulock, M.P., Toronto; Surgeon General Bergin, M.P., Cornwall; Henry Cawthra and W. R. Brock, Toronto; Medical Director, Deputy Surgeon-General G. S. Ryerson, M.P.P.,; assistant secretary and treasurer, Dr. Campbell Meyers; examiners, Drs. Strange, Grasett, King, Stuart, Dame, Nattress, Elliott, Meyers, W. H. B. Aikins and O'Reilly.

It is intended to form local branches through the province. The formation of these centres is being promoted by Dr. Ryerson, Deputy Surgeon-General, an honorary associate of the order of St. John.

A Fifty Cent Calendar Free.—The publishers of *The Youth's Companion* are sending free to the subscribers to the paper, a handsome four-page Calendar, 7 x 10 in., lithographed in nine colors. It is made up of four charming pictures, each pleasing in design, under each of which are the monthly calendars for the year 1896. The retail price of this Calendar is 50 cents. New subscribers to *The Companion* will receive this beautiful Calendar free and besides, *The Companion* free every week until January 1, 1896. Also the Thanksgiving, Christmas and New Year's double number free, and *The Companion* fifty-two weeks, a full year to January 1, 1897. Address, *The Youth's Companion*, 195 Columbus Ave., Boston.

Chordee.—*(Ricord):*

℞—Ext. opii, ... gr. j.
Camphoræ, ... gr. x.
Ol. theobrom., ... q. s.
M. et ft. suppository No. 1.
Sig.—Use at bedtime.

Incontinence of Urine.—*(White):*

℞—Sodii benzoatis, } of each, . gr. xx.
Sodii salicylatis, }
Fld. ext. belladonnæ, ... gtt. ij.
Aquæ cinnamomi, ... ℥ iv.
M. Sig. — A teaspoonful four or five times daily.

Iodide of potassium, *Med. Sum.*, added to ammonium chloride cough mixtures, increases the secretion and relieves the hard cough in subacute bronchitis.

N. MacL. Harris, of Toronto, has recently passed for the L. R. C. P., London.

Practical Dietetics; with Special Reference to Diet in Disease. By W. Gilman Thompson, M.D., Professor of Materia Medica, Therapeutics, and Clinical Medicine in the University of the City of New York; Visiting Physician to the Presbyterian and Bellevue Hospitals, New York. Large octavo, 800 pages, illustrated. Cloth, $5; sheep, $6. Sold by subscription only. New York: D. Appleton & Co.

The subject is one which does not receive much attention either in medical colleges or in the standard works upon the Theory and Practice of Medicine; the directions given in the latter being of a very general and vague character, and in the former it is dismissed in one or two lectures. In hospitals and in the training of nurses too little attention is often paid to the subject, while in works on food and dietetics the practical application of dietetics to disease usually receives but slight notice. This work is intended to remedy these shortcomings, and to furnish to the practitioner a text-book containing instructions as to the appropriate diet in diseases which are influenced by right feeding.

Beginning with the elementary composition of foods, the author next classifies them, and takes up in succession force production and energy; the force-producing value of the different classes; stimulating foods; their economic value; a comparison of the nutritive properties of animal and vegetable foods, and vegetarianism. The classes of foods are next considered, including water, salts, animal and vegetable foods, fats, and oils. In the section on animal foods much attention is given to the subject of milk in all its forms—pure, adulterated, prepared, etc.—in accordance with the great importance of the article so commonly used. Stimulants and beverages, with their good and ill effects, their comparative values, administration, and varieties, are fully and carefully considered.

The various methods of cooking food are given, with the effect of each method on the different classes; also the means used for condensing and preserving foods. The author considers the general relations of food to special diseases; those that are caused by dietetic errors and the administration of food for the sick, giving the necessary rules as to method, time, etc.

The feeding of pregnant women, nursing mothers, infants, and young children constitutes a very important part of the work, and an appendix contains receipts for invalid food and beverages suitable for fevers and convalescence from acute illness.

A Manual of Diseases of the Nervous System. By W. R. Gowers, M.D., F.R.C.P., F.R.S.; Consulting Physician to University College Hospital; Physician to the National Hospital for the Paralyzed and Epileptic. Second edition, revised and enlarged. Volume II. Diseases of the Brain and Cranial Nerves, General and Functional Diseases of the Nervous System; with 182 illustrations, including a large number of figures. Octavo, pp. 1069; cloth. Price $4. Philadelphia: P. Blakiston, Son & Co. Toronto: Carveth & Co.

The author explains the lateness of appearance of the second volume of his work, by the necessary revision and incorporation of the most important results of the investigations of the past five years. A good deal of new matter has also been added—to the extent indeed of about a hundred pages.

To those of our readers who have been familiar with Gowers' work, nothing more need be said, than that he has brought the present edition fully up to the present time, and in such a way as he alone could do it. To those who have not read it, we may say that for conciseness, clearness of explanation and completeness, the work is the best in the English, and, we believe, in any language. To the practitioner and student the work is simply invaluable.

Modern Materia Medica, with Therapeutic Notes. For the use of practitioners and students of medicine. By Dr. Otto Roth. Seventh edition. Revised by Dr. Gregor Smith, Würzburg. One volume of 467 pages, octavo, muslin binding. Price $2. New York: William Wood & Co. Toronto: Carveth & Co.

The present revision brings the work up to the present time, including the many new drugs which now form so important a part of the practising physician's pharmacopœia. It is full of prescriptions, and the very clear and practical style in which it is written cannot fail to make it of the greatest assistance to the practitioner. It embodies just such matter as would be particularly useful to a final student, and so arranged as to be easily used.

THE CANADA LANCET,

A MONTHLY JOURNAL OF

MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

The LANCET has the Largest Circulation of any Medical Journal in Canada.

TORONTO, JANUARY, 1896.

Original Communications.

SOME LIMITATIONS TO CURATIVE WORK IN STATE HOSPITALS FOR THE INSANE. A CRITICISM OF PRESENT METHODS, AND A PLEA FOR A BETTER SYSTEM OF TREATMENT OF THE ACUTE CURABLE INSANE.*

BY CHAS. B. MAYBERRY, A.M., M.D., DANVILLE, PA.

Among the objects for which this Academy was organized, we find the relief of human suffering, and under this purpose the methods pursued in the treatment of the acute curable insane may properly be considered. In the paper which I am about to present for your consideration, it is my object to bring before you certain reasons why the present system of treatment of this most unfortunate class does not accomplish the best results, and to suggest certain modifications in our methods, which have occurred to me as a result of my experience in the treatment of these cases, and which I believe would very materially advance their interests. Knowing, as I do, that in this discussion I am about to criticize time-honored customs and methods which have the sanction of age, and knowing further, that some of the positions which I shall take will not receive the approval of those to whom the greatest honor is due, not only for their long experience and knowledge of psychiatry, but also for their life-long work in relieving the sufferings of those mentally afflicted, I am nevertheless so firmly convinced of the correctness of the views set forth, that I bring them before you with the feeling that, however they may be received, I have given you the results of a thoughtful consideration of the conditions essential to a satisfactory method of treatment of the curable insane.

The question which first confronts us at the outset of our discussion, is as to the results of treatment in our State hospitals. Are they the best possible? Are as many of the curable insane brought to a normal mental condition as possible? Questions of this nature are never absent from the mind of the alienist, and, indeed, were his conscience so calloused, and his sympathies so hardened, by his contact with the insane, and his observation of their mental distress, as to cause him to forget them, he would be quickly aroused from his lethargic state by the adverse criticisms to which he is constantly subjected. The results of the alienist in the treatment of the indigent insane, always a question for adverse criticism, have been brought prominently before the public by the recent severe criticisms of eminent neurologists. Some of these are just, and strike the key-note of the situation, some are without foundation in fact and show an utter failure to appreciate the faults of the present system, and some are frivolous and unworthy of consideration.

Taking as the criterion of success the actual restoration of the curable insane to a normal condition, I believe the above questions should be answered in the negative; the results are not as good as they could be made. As a justification of this apparently damaging admission, I invite your attention to some of the different elements which act as limitations to curative work in hospitals for the indigent insane.

For the first of these limitations the general physician is responsible. The care of the patient during the invasion and early stages of the disease devolves upon him, and as to him is largely left the question of hospital treatment and the proper time for its adoption, he is responsible for the condition of the patient at the time of admission. The period of invasion of insanity is the most critical part of the course of the disease, and its treatment exercises a determining influence upon the subsequent course and prognosis of the case. Believing, as I firmly do, in a physical basis of a large part of the

* Read before the American Academy of Medicine at Baltimore.

so-called acute functional insanities, the necessity for the most thorough investigation of the physical condition is apparent. This is, however, often entirely omitted, or made in such a manner as to be of little or no value; the mind of the physician, absorbed almost entirely by the mental aspect of the case, overlooks the probability of the physical basis for the disease. By this failure to recognize, at the very outset, the bodily affection if present, its constant action upon the nervous mechanism and the mind, renders strong the tendency of the disease to become chronic, and jeopardizes, or entirely destroys, the chance of recovery. I have myself seen recently two cases illustrating in a very forcible manner the necessity for the most careful physical examination. Both were cases of hypochondriacal melancholia, a most intractable affection, with an unfavorable prognosis. Both presented hypochondriacal delusions of the most varied character, and in neither instance was the part really affected brought out prominently in the symptomatology. One was a case of internal blind fistula in ano, and the other a case of chronic cystitis, in both of whom there was a rapid mental recovery after a recognition of the condition and appropriate treatment. In one of these cases I was assured by the attending physician, that no bodily disease existed, and both had been treated for insanity. Insanity, indeed! What they needed was treatment for the cause of a reflex psychosis. Had the causative condition continued unrecognized in these cases, they would have joined the great mass of the chronic insane, and, if very fortunate, might now be permitted to reside at a "Wernersville."

Again, the time of admission to a hospital is of the greatest importance. Laying aside the question of the so-called moral treatment, removal from the irritating circumstances and home surroundings, so often scoffed at by our critics, there still remains the indisputable fact of physical failure of the acute insane during home treatment, and an almost immediate bodily improvement after their commitment to a hospital. The restless and disturbed patient, exhausted by excitement, lack of sleep and proper nourishment, becomes quiet, and takes sufficient food and restful sleep. The question is naturally asked, why cannot this be done at home? It is not, however, a question of possibility, but of reality; it might be accomplished, but is not. When a case is admitted to a hospital after a period of two weeks without food or sleep, as has more than once occurred in my experience, there is something radically wrong.

The general physician, hoping against hope that the patient will show improvement, and influenced by the constant solicitations of the family, delays sending his patient, until finally improvement seems impossible, and then turns with weariness and distrust to the hospital for the insane as a last resort, after watching his patient's chances fade away, until he dares not hope for a restoration of the broken-down body and worn-out mind. It is a well-known fact, proved by hospital statistics, that of those who recover, the vast majority are from those in whom the duration before admission is very short, and that, *ceteris paribus*, that patient's chances of recovery are best, who is admitted very early in the course of his disease. The limitations which are to be attributed to the general physician are: (1) Too great a delay in sending the patient to the hospital. (2) Unsatisfactory condition of the patient at the time of admission. (3) Insufficient physical examination.

The second limitations are due to the family and the immediate friends. After making every effort to avoid sending the patient to an institution for treatment, they finally, like the physician, turn to it as a last resort. During the residence of the patient in the hospital, their constant solicitation brings them continually before the patient, which, together with injudicious letters, may perhaps be followed by new paroxysms of excitement, sleepless nights, refusal of food, suicidal attempts, and other manifestations of a disordered mind. When the patient has improved slightly, they constantly clamor for his discharge, both to the patient and to the officers, again giving rise to irritation of mind, and undoing whatever may have been accomplished. Finally they remove the patient, in many instances, long before the mind is sufficiently stable to encounter with safety old scenes and associations. The family and friends are, therefore, to be criticized for: (1) Late

commitment. (2) Constant interference during treatment. (3) Too early removal.

Thus far we find distrust of the hospital for the insane, and avoidance of its treatment, so far as possible, by both the physician and the friends of the patient. This is in striking contrast to the method of regarding general hospitals, and naturally gives rise to the question as to its origin, and reason for existing. The solution of this question brings us to the consideration of the limitations which arise from the nature of the hospital itself.

When a man becomes insane the law provides that, if unable to provide a proper place for his own treatment, he may be incarcerated in an institution provided by the State for the purpose, presumably for his own good, as well as for the welfare and safety of the community. Consent or unwillingness on the part of the patient is unnecessary, and in the majority of cases force or deception is used in conducting the subject of insanity to a hospital for the insane. The forcible subjection of the individual to the treatment to be pursued, clearly carries with it a moral obligation on the part of the State, to place him under the most advantageous surroundings, that is those most favorable to recovery. Are we fulfilling this moral obligation? In forcibly incarcerating them in State hospitals for the insane under the present system of organization and administration, are we giving the curable insane the best chance for mental restoration? To these questions I must again give a negative reply. In my opinion the system of treatment provided by the State is illogical, unscientific, and unfavorable to restoration. A justification of this statement can be reached, only by considering the following objections to the present system :

(1) The size and scope of the present institutions. Large hospitals are constructed with a capacity for from a few hundred to several thousand patients, and serve as asylums for the chronic cases and hospitals for the acute insane. These buildings are divided into wards to accommodate from thirty to sixty patients each, the classification nccessarily being based upon the mental and physical condition of the case, and at best is a crude one. The disturbed wards contain those cases who are excited, the recent cases of acute mania and agitated melancholia, cases of circular insanity during the maniacal period, and those with dangerous homicidal and destructive tendencies ; the quiet wards of the better class contain those patients who are quiet and of cleanly habits, and those of the higher grades of intellectual capacity, the better class of chronic cases of melancholia and mania, the least deterioriated of the dements, the least disturbed of the acute cases, the paranoiacs during the earlier periods of their residence, and finally the convalescents ; the acute stuporous cases must be placed among those of similar habits, but of a hopeless character, the advanced cases of paretic dementia, cases of defective development, the inoffensive idiots and the low grade imbeciles, the advanced cases of terminal and quiet epileptic dementia, and so on until all are placed somewhere. These are necessarily grouped together, by this or any other classification which may be adopted, all grades of intellectual development, social condition, moral perception, and mental alienation. The most objectionable classes of humanity, the criminal, the moral imbecile and epileptic, with their moral obliquity, the alcoholic, and paranoiac, dements of all forms, chronic cases of emotional insanity, and finally the acute curable insane. The hitherto intelligent, thoughtful and industrious man must be associated with the ignorant, the morally bad, and the criminal classes, whom his very nature would lead him to avoid during his mental health ; the woman of refined and delicate nature, carefully protected from contamination during her girlhood, now in her period of mental distress, is brought forcibly in contact with those whose training and condition have been the reverse of her own, and the very contact with whom must be revolting to her pure nature ; the young of both sexes are associated with those who poison their affected minds with impure language and revolting habits, foreign to their hitherto spotless characters ; all of these, whose only crime against the commonwealth, is lack of wealth, are forced into daily intimacy with large numbers of insane cases, in different stages of their disease, who cannot but exert the most unfavorable influence upon their mental condition. Hygiene, says a prominent work on mental disease, is the removal of the patient from the irritating influences of home surroundings to the hospital, where the diversion of new surroundings will turn the mind into more healthful channels. Hygiene, indeed ! Are these

patients in a condition to be benefited by the study of psycho-pathology in its most obnoxious and varied forms, as illustrated by the aggregate of humanity making up the population of an asylum for the insane? Is this a form of diversion which would tend to turn the mind of the melancholiac from morbid introspection and subjective bad feeling, to a more normal contemplation of the outer world; or relieve the case of acute mania of the constant, changing and rapid perceptions of the outside world? Most assuredly not; the result, as experiences teaches, is exactly the reverse. What alienist, connected with hospitals for the indigent insane, has not heard the despairing remonstrance of the acute insane, during periods of partial lucidity, against their insane surroundings? What asylum physician has not seen present delusions made stronger, and new ones developed, as a result of contact with other cases? Who has not seen cases of the curable forms of insanity become chronic, as a result of such associations, and cases too, who should have recovered? If there are any who have been so fortunate as to escape these sad occurrences, their experience has been different from mine.

The realization of the unhealthful character of his surroundings by the curable case, as expressed by his remonstrance, points out to us the first objection to the present form of treatment. It indicates what any observant person must appreciate, and what experience teaches, that the proper atmosphere for the treatment of the insane, is not an insane one, but one in which the sane influences predominate. The contact of the acute case with the paranoiac, with his fixed and systematized delusions of persecution, so correctly reasoned out and so plausible, will secure an influence over the patient and result in delusions of persecution and suspicion with regard to his friends, physicians, and attendants, the stronger as coming from a fellow sufferer in misfortune, which nothing can eradicate. The influence of a case of melancholia with delusions of self-degradation, will strengthen similar delusions in others, or give rise to them in melancholiacs from whom they are absent. The destructive, homicidal, and suicidal tendencies, and filthy habits, are intensified or developed, by contact with subjects of these propensities, and the natural tendency is from bad to worse.

The close contact and intimacy of patients with each other is seen in every asylum for the insane, and often a strong influence is gained by the stronger over the weaker mind. The attendants, numbering perhaps one to eight in the disturbed wards, and one to sixteen in those more quiet, form but a small part of the influence to which the curable cases are subjected, and even this is neutralized by the abnormal influences. Insanity everywhere, in its varied forms, predominates; the insane atmosphere has almost undisputed sway.

Regardless of the already unfavorable character of these surroundings, some of those who have apparently lost sight of the primary object in the treatment of the insane, the restoration of the curable cases, have sought to introduce the congregate dining hall. This custom, undoubtedly well suited to the needs of the chronic cases, is totally unfit for the curable insane. Bringing them, as it must, in contact with all of the objectionable cases, instead of a part of them, it nullifies whatever advantage may have been gained by our necessarily imperfect classification, makes classification useless, and is an outrage upon the rights of these cases. Fortunately, however, this plan has few followers, and its adoption is not sufficiently general to demand much attention.

My first objection to the present system, is, therefore, forcing the patient into surroundings which are totally unfit for his treatment; surroundings which are unhygienic and opposed to his restoration to mental health.

(2) The duties placed upon the superintendent of an institution, under its present organization, are so extensive as necessarily to deprive the curable cases of the immediate attention of the chief medical officer, presumably an able and experienced alienist. While objecting to the large amount of non-medical work imposed upon him, by the financial and business management for the care of hundreds of patients, yet I believe that the superintendent of an institution for the treatment of the insane should have complete control of every department, even in the minutest details, in order that everything may work together to accomplish the one purpose in view. Without this recognized head the best work cannot be done.

(3) Under the present system the medical staff is inadequate, and necessarily appointed without

a proper preparation for the work. Young physicians, without a knowledge of insanity in its various complex manifestations, and without a practical experience in the methods of treatment, must be appointed to fill these positions, and assume, subject to the superintendent whose chief time must be occupied with business matters, the grave responsibility of these cases. Even their theoretical knowledge of psychiatry is either nil or extremely limited, the great majority of medical schools unfortunately omitting mental diseases from their curricula entirely, or giving only an incomplete and unsatisfactory course upon it as a side issue of the course in neurology, and in only a few instances do we find systematic instruction given by prominent alienists. The young men chosen to fill these positions are usually selected with care by those having the appointing power, many of them have had a college education for their medical studies, and a large proportion of them have had a term of service in general hospitals after their graduation in medicine, but they are given little or no opportunity for a study of psychiatry, and as a result the first years of their service in the hospitals for the insane are used in making up the deficiency. If the alienist has a right to claim his field as a specialty, as he undoubtedly has, some practical and theoretical knowledge should be demanded of those appointed upon his staff, and as the treatment of the curable insane is of too much importance for the institutions provided for this purpose to serve as training schools in psychiatry for the recent graduate, some other opportunity for such training should be given. Furthermore the number of physicians is entirely inadequate. We find the assistant physician with hundreds of insane patients under his care, and with the general medical work, the excited stages of the chronic forms of insanity, clerical duties and other work to occupy his time, but little time is left for the study of the acute insane under his care. Consequently the time which should be given to the most careful study of these cases is totally inadequate, and as a result the most thorough knowledge of such cases is either not obtained, or it is obtained only at the expense of other duties. Nowhere is close and constant study of a case so necessary as in the rational treatment of the insane. In general diseases ot a diagnosis once made, and a course of treatment determined upon, the case needs simply intelligent watching for new indications and complications. In insanity, with its constantly varying symptoms, its changing delusions, morbid propensities and imperative conceptions, changes cannot be detected by the physician by the use of some sensitive instrument like the clinical thermometer, but are discovered only by the most constant and careful scrutiny of the constanly changing panorama which is passing before him, every phase of which must be observed, in order that the most successful treatment may be pursued. Under the present system, this cannot but fail.

(4) The attendants are insufficient in numbers and, in the great majority of cases, totally unfit for the work. Upon no part of the organization of a hospital for the insane does the success of treatment depend more directly than upon the efficiency of the attendants. Constantly present, as they should be, with their influence always exercising an important control over the mind of the patient, they form an essential part of the healthful atmosphere which should surround the curable insane, and to them in great part belongs the duty, by proper conduct, example and guidance, of leading the afflicted mind of the patient into more rational channels. Nowhere are kindness, sympathy, intelligent interpretation of the methods used, and a proper understanding of the objects to be accomplished, more essential than in the care of the insane. A harsh word, injudicious conduct or ridicule, will do irretrievable harm. The necessity for better attendants has long been recognized by the officers of hospitals for the insane, and its accomplishment has been attempted by the commendable effort to raise their standard by the organization of training schools. Some good results have followed this movement, but here again we have to contend with an insurmountable obstacle, the insufficiency of their mental qualifications. The remuneration which attendants receive is insufficient to bring to institutions many of those who are fitted, by education and natural aptitude, to fill the responsible position of trained nurse and attendant upon the insane, and as a result our material is largely incapable of training. Furthermore, of those who are well fitted for the work, the majority soon find more lucrative positions outside of institutions, and the advantage gained by the training schools is thus

largely diminished. If the number of attendants is insufficient, harsh measures must often take the place of more gentle ones, and the influence of other insane patients must supplant the sane influences which are so essential to recovery. With these conditions, therefore, the best results cannot be accomplished.

To the objections already offered to our present system, I might add the inadequate appropriations for the care of the curable cases, limited, as they are, to the economical provisions considered necessary for the maintenance of the chronic insane; the insufficient means for providing proper mental diversion; the incompleteness of even the medical and surgical appliances, to meet the needs of every case. But those already given demonstrate the impossibility of ever making curative institutions out of these great asylums for the chronic insane, and further objection would be useless.

The necessity of depriving a man of his liberty and placing him forcibly under treatment, however unfortunate this necessity may be, must be admitted, and since the present system fails to accomplish the best results for him, we are brought to the question of providing a more promising method of treatment for the curable insane. Recognizing the truth of this statement, attempts have been made to remedy the difficulty, but, ignoring the conditions essential for success, they have met with failure. Such a failure is the recent "new departure" in Pennsylvania, a departure so new indeed, that it had been tried and abandoned in some other States, long before it was tried here. This movement, from which much was promised by its originators, and from which hospital physicians hoped for at least some assistance, resulted in the construction of an asylum for the chronic insane, at vast expense. The object of this institution was presumably to relieve the crowded condition of the hospitals by removing the chronic insane from their wards, and by diminishing the contact of the curable with the objectionable chronic cases, thus to increase the remedial work of the hospitals. The failure, however, has been greater than the promises. It has resulted in the removal from the hospitals of those chronic cases who are quiet, able-bodied, inoffensive, not homicidal, suicidal, epileptic, or paralyptic, not inclined to elope, able to do a good day's work, and of cleanly habits, those who might be properly taken care of at home, or in any well-regulated almshouse, while it has left for the association with the acute insane, the remainder. Those who would do the most injury to the acute insane remain, while the least objectionable were removed. A dismal failure! A waste of money without adequate return! God forbid that anything that I may say should be construed as opposing any movement to improve the condition of the chronic insane! They deserve our sympathy; they require our care, and we are morally bound to give it. Let us give up to their use the present State hospitals. Centralize them in these places, and if necessary, make additions to the present buildings; provide them with workshops and manufactories under the charge of skilled mechanics, where they can lead useful lives; make their lives as pleasant and useful as their condition will permit, and if possible make them self-supporting communities. Let us not forget, however, that our first duty is to prevent the acute insane from becoming chronic, and if we use the great hospitals for the care of the chronic cases, instead of utilizing them as preparatory schools for a Wernersville, and provide separate means for the treatment of the curable insane, the number of chronic cases will in the future diminish.

For the separate treatment of the curable insane, I would offer the following scheme for construction and organization:

1. The construction of a sufficient number of small hospitals, the capacity of each to be limited to sixty patients. Each of these hospitals is to consist of several small cottages for the accommodation of not more than eight patients. The location is to be near the largest city in the district for which the hospital is provided, but sufficiently far to allow land enough for our buildings to be reasonably distant from each other, and in no instance are they to be placed near one of the asylums. These small buildings are to be made home-like, but not expensive, divided into rooms instead of wards, with an absence, so far as possible, of iron bars, gratings, walls and other suggestions of a prison-like aspect, and surrounded by lawns which are neat and attractive. In these buildings are to be placed the means for carrying out the modern methods of treatment, baths, elec ricity, massage, and gymnasium, as well as the most approved methods of well-regulated

mental diversion. Here are to be admitted only the cases of the curable forms of insanity, and since many of the so-called acute cases are essentially chronic from the beginning, the fitness of a case for admission is to be determined by a careful examination by one of the resident officers, and upon his judgment must rest the decision. The classification is to be one of individualization as far as psssible, and may rest in part upon the following principles: First, a determination by constant examination, as to what cases may cause mental injury to each other by contact, and these to be always kept apart. Second, the social condition, habits of life and moral condition, are to be considered. The young of both sexes are to be carefully kept from contact with those, who by their former life and moral coudition, would cause the development of impure thoughts and malicious habits, in order that, in the event of recovery, they may be returned to their friends as pure in thought, word and deed, as before their sickness. Third, while those cases which are intensely excited must of necessity be grouped in the same buildings, for the good of others, yet the moral classification should be strictly observed, and the number of attendants is to be sufficient to prevent harmful intercourse. Fourth, the depressed cases, especially those with similar delusions and feelings, are to be kept apart, and placed among the cases of mild exaltation. Fifth, the convalescents are to be kept apart, still observing our moral classification. Sixth, when a case becomes chronic and is considered incurable, he is to be removed to one of the asylums.

2. The head of this system, having complete control, is to be an educated and thoroughly competent alienist, who by his experience in the treatment of the acute insane, will be able to direct all parts in such a manner as to work in unity to serve the one great purpose, the cure of the acute insane. Friction here is to be avoided, for when this occurs, even in the least important matters, some injury is suffered by the patients, and this can be avoided only by a medical officer who is supreme. The superintendents of the hospitals under the present system, men who by their study of psychiatry, by their long practical experience in the treatment of the insane, and by their manifest fitness to accomplish the best work under the system here suggested, as they have done under the present system, should be made superintendents and chief medical officers of the new institutions.

3. A staff of visiting specialists is to be appointed, the members of which are to be called upon to treat, in conjunction with the resident medical staff, those bodily troubles which naturally fall outside of general medical work into the field of the different specialties.

4. The resident staff is to consist of at least three physicians, fitted by their knowledge of general medicine, and experience in the treatment of the insane, to assume the duties of their positions, the senior of whom is to fill the position of assistant superintendent. They are to be appointed from the older members of the medical staffs of the asylums by promotion, length of service and ability to be the determining points. Upon them shall devolve the treatment of the patients, careful physical examinations, constant examinations of the morbid mental processes, and the keeping of the complete records of the original condition and progress of the case.

5. The body of attendants is to be made up of young men and women of good moral character, who, besides a sufficient general education, shall have a course of theoretical and practical instruction in the nursing of the sick and the care of the insane. These positions are to be filled from those attendants of the State asylums who have pursued a course in the training schools, either already established or to be established, in connection with their work in the asylums, and have received from these institutions certificates of proficiency as trained nurses and attendants upon the insane. The change from the asylum to the hospital is to be in the nature of promotion, with increased remuneration. They shall be sufficiently numerous to give a general predominance of the sane over the insane mind.

6. The increased cost of the care of the acute cases is to be shared by the State and the poor district from which the patients come. The per capita cost is not to be limited to any fixed sum, but is to be sufficient to accomplish the best results.

This is the system of treatment of the curable insane which I would suggest, described briefly, and necessarily in an imperfect manner. When, in the developmental process going on in the treat-

ment of the insane, some system similar to the above shall be adopted, all of the limitations suggested in this paper will be removed. The general physician will turn gladly and immediately to the hospital as the most favorable place for the treatment of his patient, as he now seeks the general hospital in cases requiring the attention of a specialist; the friends of the patient, the horror of asylum associations, and intercourse with crowds of demented, outcasts and criminals, removed, will quickly seek the hospital as a safe and sure refuge, in the time of trouble; and even the economist, I believe, will eventually appreciate the advantage of supporting the patient for a short time, even at a greater expense, and having him return to his family and society, as a rational and self-supporting man, rather than supporting him for years as a chronic lunatic, and perhaps his family for years as paupers.

When the time comes for this generous view as to the treatment of the insane to be adopted; when the necessity for the separation of the acute and chronic insane is recognized as essential to hygienic surroundings for the treatment of the curable cases; when humanity, philanthropy and science, shall go hand in hand in accomplishing the mental restoration of the curable insane; when a rational system of treatment, with mental hygiene and our experience as its fundamental basis, shall be adopted, then I believe the best work in the treatment of the insane will be accomplished. And when that time shall come, we will be able to say with truth, that we can "minister," and minister successfully too, "to a mind diseased."

TRAUMATIC SEPTICÆMIA.

BY J. C. MITCHELL, M.D., C.M., ENNISKILLEN, ONT.

Wm. E., a farmer, æt. 34, while engaged, Feb. 8th, 1895, in constructing a ladder, made a slip with a drawing knife that produced a slight incision over left knee cap. The wound was very small, with scarcely any hæmorrhage. He continued his work until noon—about two hours—when he dressed the wound with a clean strip of cotton.

He was not enjoying vigorous health, as two fingers that had received slight abrasions of the skin some two weeks before had not healed, but were freely suppurating. He did not feel any inconvenience from the wound until the second day, when he experienced some pain in the limb and groin. The third day the left limb began to swell slightly, and he had chilly feelings with some fever. The swelling increasing daily he was obliged to take his bed. The wound looked well. Poultices had been applied and morphia given for the relief of the pain.

On the evening of the sixth day I first saw him. Condition as follows: Thrombosis of left femoral vein, a great amount of infiltration of tissues of the whole limb, except at knee and over anterior surface. The circumference of limb was double that of right, both above and below knee. The tension was extreme, especially on outer side, where it was of board-like hardness. Some infiltration above the crest of the ilion extending up to ribs, and a slight amount over lower part of abdomen. The whole limb not hot, but moderately warm. The integument on both outer and inner aspects of limb, except at knee, was dark red, in some places of a dusky hue. The wound looked healthy; it had healed by first intention. Lungs were clear, a little congestion of bronchi; heart weak, irregular, pulse 106, compressible and intermittent; temperature 103° F., tongue dry, furred at edges, with central brown streak; eyes sunken, countenance haggard and anxious; bowels had been moved freely, micturation tedious and painful. There was a good deal of delirium, and the general appearance was that of speedy dissolution.

The limb was thoroughly wrapped in hot linseed meal poultices, and had been from time swelling began. No other treatment except an occasional dose of morphia had been used.

He was ordered liberal doses of milk, whisky, and quinine until next day, when I returned to find general conditions improved. He had slept fairly, and was taking nourishment, stimulants and tonics well. I now found some blebs and ecchymosis at lower and outer third of thigh, and upper and outer third of leg. Made incisions, but did not get any pus; found, however, that the infiltration was all between integument and superficial layer of muscles. On the ninth day after the injury, there began a very free discharge of ichorous pus from opening on thigh, and the day following from the one on leg, at the points where

ecchymosis first appeared. The integument sloughed out in both places, from one to two inches in diameter. The swelling of limb went down rapidly, when the pus discharge became free, and the thrombosis disappeared. There was extensive destruction of the connective tissue between skin and superficial layer of muscles on outer side of thigh and leg. There was no pus formation at any greater depth.

The pus tracts were thoroughly washed out twice daily with a solution of peroxide of hydrogen. The general treatment was that indicated by symptoms: nourishment, stimulants, quinine, iron, and a little strychnia.

He improved rapidly, complaining at times, however, of stiffness in muscles of right arm, and of numbness on ulnar side of same hand.

On the forenoon of the twentieth day from time of injury, I was hastily summoned, and found him with a severe spasmodic seizure of clonic character. It more particularly affected the upper extremities, although the muscles of trunk and lower extremity were included. There was some rigidity of muscles of neck, but none of jaws or face. He was quite rational, could converse, but had no control whatever over his limbs. The whole frame with the exception of head was heavily convulsed. The exercise was so continuous, although the room was very cool, that the perspiration rolled from him as if he were engaged in hard manual labor. He had one seizure before my arrival, lasting forty minutes, then an interval of an hour, followed by the one in which I first saw him, which lasted thirty minutes. There was then an interval of thirty minutes when another attack began, which I watched closely. It began with tonic spasms, first in right then in left hand, gradually extending to arms, trunk and lower extremities, when the spasms became clonic, and lasted with great force for an hour and was attended this time with some opisthotonos. There was cyanosis of face and neck, dypsnœa, and a distressed appearance, with a feeling of impending evil. He could swallow, and drank with but little difficulty; could speak and answer questions clearly. He had seven similar attacks that day varying in severity, and they continued for a week, having from two to four daily. They ceased then for two days, recurring once only after partaking very heartily of a meal of beef and potatoes, when the attack was a very severe one.

No further indiscretion in diet was permitted and these nervous manifestations ceased entirely. It required large and repeated doses of chloral hydrate and potassium bromide to relieve the first seizures.

Four days after the last spasm he had a severe rigor and the temperature went up to 105°. A small metastatic abcess was found and evacuated, near left popliteal space, when fever disappeared. From that time he made an uninterrupted recovery and was able to resume his occupation by May 1st.

This case had plenty of time to develop before there was any medical or surgical interference, and is a typical case of phlegmonous inflammation from absorbtion into a slight wound of a micro-organism. The tissues of this patient, as exhibited by the festering fingers, were in a proper condition to furnish a most favorable pabulum for the ravages of micro-cocci. These micro-organisms were undoubtedly introduced either from drawing-knife or the suppurating fingers.

There was direct infiltration of tissue interstices by the immediate growth and extension of the microbial colony, then the superficial lymphatics openly communicating with the foci of suppuration carried the microbes into the vicinity of the large veins producing the thrombosis, and materially augmenting the stagnation. From the dusky hue, hardness of tissues, blebs and ecchymosis, I at first feared gangrenous phlegmon, and was greatly relieved when the pus discharge began.

The nervous phenomena were not orthodox in their manifestation. The patient, when a young man, had a mild attack of chorea, but this was not at all of that nature. It was not hysteria, for he was not of that temperament, nor were the attacks like that. The spasms proceeding from the periphery, no initial spasm of the masseters, the muscles of the jaw not at all implicated, and the clonic character of the spasms, ruled out the much-dreaded tetanus.

Having had in my practice one well-marked case of idiopathic tetany, this was sufficiently like it, although not in accord in all points with the text books—for me to place it in that class. The only point in which it materially differs is in the

spasms changing from tonic to clonic although they invariably began tonic. Trosseau's symptom was very well marked, and I could bring on a tonic spasm at any time by pressure of any of the large vessels. Morphia first tried, did not relieve the spasms to any extent, nor did large and repeated doses of the bromides, but they succumbed speedily to chloral and bromide combined.

The festering fingers, to which I have alluded, and which had proved so obstinate with him, healed at once when discharge came freely from leg.

Why did the original wound on knee, heal so kindly, with no untoward symptom, it being the door of the introduction of the poison and the medium of contamination to the whole neighborhood?

Would this case bear out the theory of Weiss that tetany is caused by an irritable condition of the gray matter of the medulla? It was undoubtedly caused by a toxic condition of some of the large nerve centres, the poison being conveyed from the contaminated neighborhood.

A good many would probably classify this case as one of pyæmia, but as there was general systemic poisoning, other tissues than the blood being extensively implicated, I decided upon the term septicæmia.

Selected Articles.

SURGICAL ASPECTS OF PERITONEAL TUBERCULOSIS.

The element of romance which has developed within recent years around tubercular lesions of the peritoneum has not yet evaporated. The striking and unexpectedly favorable results of operative interference in tubercular peritonitis continue to afford a congenial subject for speculation. So far as the anatomical and physiological peculiarities of the peritoneum are known to us, we do not find in them a sufficient explanation of the clinical fact that tubercular disease in the peritoneum is benefited by surgical exposure of the diseased tissue to a degree which does not obtain in the pleura, synovial membrane, tendon-sheaths, skin or in other organs and tissues.

Following the initial successes of Spencer Wells and Kōnig, cases of tubercular peritonitis subjected to laparotomy have been recorded in increasing number by different surgeons following different methods, and it has been found, broadly speaking, that benefit resulted whether the peritoneal cavity had been irrigated or simply inspected, whether drainage had been employed or not, whether iodoform, camphorated naphthol, or other agent credited with the possession of anti-tubercular properties had been introduced, or such procedure omitted.

As a result of the empirical knowledge thus acquired, it was only natural that the favorable influence of laparotomy should have been ascribed to one or other of the incidental accompaniments of the operation.

The removal of ascitic fluid seemed a reasonable explanation of the phenomena in cases where a quantity of fluid had been evacuated, but that it is not the essential factor is shown (1) by the comparative absence of improvement in cases in which the fluid has been aspirated; (2) by the fact that improvement has resulted from laparotomy in cases where there has been no fluid to evacuate; and (3) by the fact that in cases in which the surgeon operated with the object of evacuating fluid, and because of the fluid being circumscribed or encysted it was not possible to reach the accumulation, recovery ensued, although fluid was allowed to remain within the abdomen.

The admission of air into the peritoneal cavity is still regarded by a small minority as the explanation of the phenomena under consideration, and they claim to have achieved a certain measure of success by drawing off the fluid through a cannula and pumping in air or oxygen which has been sterilized by passage through cotton-wool and warmed by passage through hot water. It is highly improbable that the entrance of air or gas has any influence in the beneficial results so obtained. In operating for tuberculous ascites, air does not enter the peritoneal cavity unless the procedure is modified with this object in view, and yet the number of cases benefited by simple incision already amounts to several hundred. It therefore appears illogical to ascribe the benefit to that which, after all, can only be an infrequent and accidental accompaniment. It is hardly incumbent on us to consider separately the other theories which have been suggested, although they have been advanced in all sincerity by competent observers. The escape of ptomaines and toxines, the entrance of antagonistic organisms, the exposure of the peritoneum to sunlight, the anæsthetic, a modification of the state of pressure within the abdomen, have each their respective advocates and adherents.

It does not seem unreasonable to infer that the incision itself is the one constant and essential factor in the curative influence exerted by laparotomy, and that the benefit is due to the surgical interference *per se*, and not to any particular method of interference, nor to any of its incidental accompaniments.

It is to be borne in mind that tubercular peritonitis terminates in spontaneous recovery in a considerable number of cases. In the peritoneum the tissues and the bacilli appear to meet on more or less equal terms, and the conditions of the struggle for supremacy are probably such that only a little assistance is required in order that the tissues may gain the upper hand; such a reinforcement of the tissues, or stimulation of their energies, may be regarded as being supplied by the changes which result from the making of an incision into the peritoneal cavity and the attendant manipulations of the affected tissues. There are clinical evidences in favor of this explanation of the phenomena. Among others, I may refer to a group of cases which have recently been made the subject of interesting papers by Harold Stiles and by Goldmann. I have had no fewer than three such cases under my own observation; they are met with in male children, and are characterized by the simultaneous occurrence of tubercular disease in the patent processus vaginalis and in the general peritoneum. It has been abundantly shown that excision of the tuberculous processus vaginalis with or without the testicle, or simply incision of the processus, is followed by cure of the peritoneal tuberculosis in a consecutive fashion which strongly suggests that the connection between the operation is one of cause and effect.

The operation upon the vaginal process in these cases may be regarded as analogous to the laparatomy in tubercular peritonitis, both being followed by improvement or cure of the tubercle diffused throughout the peritoneum.

A more remarkable example of the beneficial influence which results from exposure and handling of the diseased tissues in tubercular lesions within the abdomen is afforded by the following case, in which a tubercular tumor involving the cæcum completely disappeared after an exploratory operation. An unmarried woman, aged 36, was admitted to the University Clinical Wards of the Royal Infirmary in the beginning of August, 1894, with a history of four distinct attacks of illness attended with pain in the right iliac fossa, with vomiting, and with disturbance of the bowels. She was supposed to be suffering from recurrent appendicitis. Bimanual examination revealed a well-defined, firm, movable tumor in the right iliac fossa. Professor Annandale (whom I assisted at the operation) opened the abdomen in the right semilunar line. The tumor when exposed was found to be the cæcum, firm, solid and crumpled-looking, with the vermiform appendix fused to it posteriorly and inferiorly; the serosa of the adjacent coils of the ileum was studded with miliary tubercules, and there was very noticeable enlargement of the lymphatic glands in the corresponding portion of mesentery; one of these glands was removed, and on laboratory examination was found to be tubercular. The tumor of the cæcum was not further interfered with, and the wound was closed. She returned to the country and was not seen again until May of this year (1895), nine months after the operation; her health was completely re-established. I again made a most careful bimanual examination, and could find no trace whatever of the tumor which had been felt with such ease before the operation.

The relation of the above case recalls the close analogy which it bears to the historic case of Spencer Wells, in which the abdomen was likewise opened on a mistaken diagnosis, and in which the cure of the disease afforded infinite surprise to the surgeon. Professor Annandale's case is, however, the more remarkable inasmuch as the disease inasmuch as the disease involved not only the peritoneum, but apparently all the coats of the affected segment of intestine, and it is a most important observation that the disease entirely disappeared as a result of its being exposed and handled. It is a matter for congratulation that the affected portion of bowel was not resected, according to the routine practice of some operators, or the case would have served no better function than to adorn or mar the statistics of intestinal surgery.

It will be remembered that cases have been recorded by Greig Smith, Crawford Renton, and others in which tumors, found to be irremovable on exploratory laparotomy, have afterwards disappeared and left no trace of their previous existence. As, however, in these cases no microscopical examination was possible, they are less instructive than they would otherwise have been.

Returning to the subject of peritoneal tuberculosis and its treatment by operation, reference may be made to certain experiments which have recently been carried out by Mannoti and Baciocchi with a view to determine the influence and the *modus operandi* of the operation. Having induced tubercular peritonitis in dogs and rabbits in the usual way, a certain number were "left to themselves"; with the exception of one dog, which showed signs of spontaneous recovery, all died of general tuberculosis within a period which varied from 7 to 9 weeks in the rabbits, and from 11 to 13 weeks in the dogs. The remaining animals were subjected to laparotomy; in the case of the rabbits, though death was not averted, the lethal termination was much delayed, there were evidences of decided although temporary improvement, and the tubercular process appeared to have its activity diminished. Among the dogs, on the other hand, seven completely recovered, improvement was very decided in two, while in two there was no change. In the case of the animals which recovered, the peritoneum on examination was found either to have regained its

normal appearance or to present adhesions and scarred tubercular nodules. The changes observed in the process of recovery consisted in granular disintegration of the bacilli, phagocytosis by epithelioid cells, degeneration of the cells constituting the tubercular tissue, penetration of the latter by new vessels and connective tissue, leading to its absorption and replacement by scar tissue. The authors quoted point out that the processes described are the same as those observed when recovery takes place without laparotomy, and they express the opinion that the operative interference stimulates or increases the reparative changes by the mechanical influence which it exerts on the impressionable peritoneum.

Both from clinical experience and from experimental evidence, therefore, we may conclude that the beneficial results of surgical interference in peritoneal tuberculosis are due to the making of a wound through the wall of the belly and the attendant manipulation of the parts concerned.

In disscussing the bearing of the above conclusion upon practice, it is not to be assumed that all cases of peritoneal tuberculosis are to be subjected to surgical interference.

In view of the natural tendency to spontaneous recovery, no case should be submitted to operation until medical treatment has had a fair (although not too prolonged) trial. Among the local measures included under this head I am inclined to place most reliance on careful massage of the belly, and on measures calculated to restore the normal functions of the intestine.

The inunction of mercurial and other ointments is probably chiefly beneficial because of the mechanical manipulations concerned, stimulating the tissues invaded by the bacillus to grapple with the latter. The inunction of ointment may be regarded as a gentle and safe form of massage.

The securing of regular and copious evacuations of the bowels by drugs, aims at cure of the catarrh, cessation of fermentation processes, and an increase in the eliminating powers of the mucous membrane. Should evidences of recovery not present themselves the question of operation is to be considered.

In all cases of diffuse serous or purulent ascites, operation is very certain to cure and very easy of performance; a free incision is to be made through the belly wall, the fluid is to be evacuated as completely as possible (turning the patient on one or other side for this purpose).

When the fluid is serous, the wound is then and there to be closed by suture, it being optional and perhaps advantageous to insert some iodoform into the parts exposed by the incision, rather with the object of preventing tubercular infection of the tissues of the abdominal wall, and consequent breaking of the scar at a subsequent period, than of influencing the existing peritoneal tuberculosis.

When the fluid is purulent (cold abscess), it is better to insert a drainage tube within the lips of the wound, and to remove it on the second or third day when the amount of discharge is no longer sufficient to soak the dressings.

To leave in a drainage tube for a longer period is injurious, as on the one hand it favors the development of a sinus, and on the other its inner end may, by its mechanical pressure on the weakened wall of the intestine beneath, favor perforation of the latter and the formation of a fæcal fistula. As soon, therefore, as the drainage tube has fulfilled its function, it is to be removed, and the space which it occupied filled up with iodoform.

The features of cases with ascites, whether the fluid is serous or purulent, are so well known that of those which have come under my own observation I shall only instance one, because of the individual peculiarities which it presented. The patient was a stout red-faced man fifty years of age; he had a large diffuse lipoma of the neck, and an enormous distension of the belly with fluid; the ascites was supposed to be result of hepatic disease. The abdomen was opened in the region of the liver, and after the fluid had been allowed to escape, the peritoneum was found to present the most diffuse and abundant miliary nodules and pedunculated masses of tissue; one of these latter was removed, and on being examined in the laboratory proved to be tuberculous. The sequel of the case is not known, as he became insane and was transferred to an asylum.

Of cases in which the fluid is encysted or circumscribed by adhesions, I have had no personal experience; but reports have shown that it is in the majority of cases remarkably successful.

It is in the third group of cases, in which fluid is either absent or relatively small in quantity and in which adhesions and matting constitute the predominant features, that more knowledge is required both in regard to diagnosis and to the advisability of operative interference. I have had personal experience of five such cases, in all of which I operated at one stage or another—in two for the purpose of relieving obstruction of the bowels, and in the remaining three with the object of bringing about improvement or cure of the tubercular condition. In all of the cases, the diagnosis was materially assisted by a rectal bimanual examination made under anæsthesia; in all, a tumor or swelling was to be felt occupying the pouch of Douglas consisting of a mass of adherent coils of bowel, filling up the pouch and bulging into the rectum. In one of the obstruction cases, this tumor was so prominent that it was mistaken for an intussusception by the practitioner who sent the case into hospital. This matting of the intestines in the pouch of Douglas is one of the evidences of the fact that tubercular peritonitis is always more marked below than

above the umbilicus, and serves to illustrate the influence of gravity in the localization of infective disease within the cavity of the peritoneum.

The operations for obstruction were remarkably successful, and the cases are of sufficient to merit being recorded in detail. The first was that of a boy aged twelve who had suffered for five weeks from pain in his side. Two days before admission he commenced to vomit, and on the morning of admission the vomited matter was stercoraceous. His appearance suggested tubercle, he was emaciated, the skin was dry and harsh, the belly moderately distended and very tender. *Per rectum*, the pouch of Douglas was occupied by a semi-solid mass which bulged the anterior wall of the rectum. I opened the abdomen in the middle line (10th November, 1895,) and found the peritoneum studded with tubercular granulations. The coils of intestine were glued together by tubercular exudation, but were capable of being separated from each other with care. About two feet above the cæcum, the ileum was kinked upon itself, and the bowel beyond was small and collapsed. The opposed surfaces of the kinked segment, being only gummed together, were separated from each other, and it was then possible to pass on the intestinal contents from the ileum into the cæcum. There was no fluid in the peritoneal cavity ; the wound was closed in the usual way ; there was no further sickness. His convalescence was retarded by tubercular ulceration in and around the laparotomy scar, which ultimately yielded under the liberal application of iodoform powder. He was sent home, apparently in perfect health, and having gained nearly a stone in weight during his sojourn in the hospital. Some months later, a patient from the same village reported that he continued to present the appearance of perfect health.

The second case in which I operated for obstruction was a boy aged sixteen, belonging to a tuberculous family, who, after a period of ill-health, attended with loss of flesh, was seized upon the day before admission with pain in the belly and vomiting, the latter becoming stercoraceous. The belly was not distended or tender, but presented irregular areas of dulness and resonance and decided resistance or induration in the hypogastric and iliac regions. *Per rectum*, one was able to feel a tumor of large size, firm and fixed, projecting the anterior wall of the rectum. This tumor was so well defined that the practitioner who sent the case into hospital regarded it as an intussusception. I operated on the 17th Feburary, 1895, commencing with a median incision below the umbilicus. As I could not get into the peritoneal cavity on account of the dense adhesions between the viscera and the parietes, I made a second incision outwards towards the cæcum and at right angles with the first. Several coils of distended small intestine were thus exposed, their peritoneal surface being studded with miliary tubercles. As no explanation of the obstruction could be found, I made a third incision in the left iliac region and exposed a similar condition of parts. I introduced my hand and felt the spleen studded with tubercular nodules, but no cause of the obstruction ; I therefore opened one of the distended coils of small intestine and closed the remaining wounds. The sickness did not recur, the artificial anus discharged well, and three days after the operation he passed a large natural motion *per rectum*. The wounds healed, and he made an excellent recovery ; I had to close the artificial anus by a plastic operation six months later. It is now two years and a half since the operation, and he enjoys perfect health, being able for abundant exercise in addition to his work as a rivet-beater.

In the three remaining cases with matting and adhesions, the operation was performed with no other object than to exert a favorable influence upon the tubercular condition. All were males, aged six, fifteen, and thirty-seven respectively. In the first of these the operation consisted in a median incision below the umbilicus, and partial separation of the adherent coils of intestine underlying the area of the wound. It was followed by a most satisfactory recovery ; as only four months have elapsed since the operation it is not possible to regard the case as permanently cured.

In the other two cases, the prospects of benefit from the operation were less favorable, because of the fact that in each there was evidences of more serious loss of health, and a suspicion of tubercular disease in the lungs. In both the operation consisted in an attempt to open into the peritoneal cavity and to separate the coils of bowel exposed in the wound. In both fæcal fistulæ formed at a subsequent date, and while a decided improvement in their general condition and in their sufferings was recognizable death resulted in both. The boy, aged fifteen, died five weeks after the operation, and *post-mortem* examination revealed a large empyema in the right side. The man, aged thirty-seven, died three weeks after the operation. No examination was allowed ; but I believe he died of pulmonary tuberculosis, and that this was present at the time of his admission to the hospital, when his condition was regarded as hopeless, and I only ope
because of the chance of improvement and because I believe the operation would not have (as I do not believe it did have) any adverse influence. Had I been influenced by statistical considerations, I certainly would not have operated on a man who, at the time of admission, gave every promise of dying of tuberculosis.

In the light afforded by these five cases of the adhesive type of tubercular peritonitis and of those recorded by others, I hold the opinion that they, while less favorable than the cases in which fluid

accumulation is the chief feature, are capable of being favorably influenced by laparotomy, provided there is no serious tubercular lesion elsewhere in the body (lung, pleura). The *modus operandi* is, in all probability, the same as in tuberculous ascites; the operation itself is, however, very much more difficult, and at the time less satisfactory, for the interference is literally a mere inspection of the parts exposed by the wound. Infinite care must be taken not to injure the bladder or intestine. When one fails to open the peritoneal cavity in the middle line below the umbilicus, a second, or even a third, incision should be made; for unless the peritoneum is cut into, no improvement can reasonably be anticipated. In view of the fact that adhesions are always more pronounced below the umbilicus, the second incision, when required, should be made above this level, for by so doing the peritoneal cavity will be opened into with greater certainty. A drainage tube must on no account be employed. The formation of a fæcal fistula is not an infrequent complication, but so long as it opens on the skin surface it is not of serious import; it is quite otherwise when the fistula discharges in the midst of the matted coils of intestine. It has been abundantly shown that perforation of the wall of the bowel is not the result of ulceration of the mucous membrane (which is quite exceptionally present in cases of tubercular peritonitis), but the result of the breaking down of a tubercular nodule on the peritoneal or external surface of the bowel: *i.e.* from without inwards.—Alexis Thompson, M.D., F.R.C.S. Ed., in *Pract.*

INTESTINAL OBSTRUCTION.

In an editorial in the October number of the *Archives of Pediatrics*, the writer remarks that intestinal obstruction is a comparatively common affection during childhood and infancy. It may be due, he says, to congenital malformation, and if such malformation is extreme, the infant does not long survive, but soon dies with all symptoms of obstruction of the bowels. In rare instances obstruction results from constriction by adhesions, the impaction of foreign bodies, fæcal impaction, or diverticula. Volvulus is comparatively rare in children. When it occurs, its most common site is the sigmoid flexure. Pain in such cases is violent, and the constipation is obstinate, there being no passage either of fæces, of mucus, of blood, or of flatus. Vomiting occurs late, and is rarely urgent. An operation is extremely unsatisfactory, as the volvulus, even when successfully straightened, is prone to recur.

Of the various conditions to which intestinal obstruction may be due, intussusception is by far the commonest among children. In infancy, intestinal obstruction and intussusception are almost synonymous terms. In more than half of all the cases the lesion begins at the cæcum, the ileo-cæcal variety being the most frequent. The cæcum is first inverted, and afterward the colon. The ileo-cæcal valve is pushed before the ileum and is found at the apex of the intussusception. In rare cases the ileum slips through the valve, forming the ileo-colic variety. In all forms of intussusception, except the ileo-colic, the apex remains constant, while the neck changes its position, the intussusception growing at the expense of the sheath. The tumor, therefore, advances. In the most common form, the ileo-cæcal, although the lesion begins on the right side, when it has become sufficiently extensive to be detected by palpation the tumor is felt on the left side. The mass with the ileo-cæcal valve at its apex may commonly be felt at the rectum, and not infrequently it protrudes.

The symptoms, says the writer, frequently obscure at the outset, usually become distinctive as the lesion progresses. Violent pain, at first spasmodic; vomiting, frequently persistent; obstinate constipation, with a discharge of mucus and blood from the rectum; tenesmus, which, with the discharge of mucus and blood, may lead the unwary into a diagnosis of dysentery; and the presence of a tumor, are the points upon which a diagnosis is to be rested.

In another editorial the writer deals with the treatment of intussusception, which, being a mechanical condition, he says, must be relieved by mechanical means. Drugs, except opium, are either useless or dangerous. A cathartic should not be used under any consideration when there is even a suspicion of this condition. If one has been administered before the diagnosis has been made, its action should be checked as far as possible by the free use of opium. Opium in small doses, by relieving pain, may, in the first stages, prove of the greatest service. The chief objection to its use is the danger that it may mask the symptoms and lead to the false belief that the patient is improving. Attempts at reduction should first be made by means of injections. Time should not be wasted upon various methods of inflation and taxis. Injections of warm water by means of a fountain syringe are so far superior to all other methods that when they have been thoroughly tested and failed an operation should be resorted to. Thorough testing does not mean spasmodic efforts with a bulb syringe. This is a dangerous instrument, for a man may easily apply a pressure of ninety pounds to the square inch —a force sufficient to rupture the intestine. Here, as in many other conditions, spasmodic pressure may utterly fail, while continuous, steady, and properly regulated pressure will succeed. Such pressure can not be obtained with a bulb syringe, a bellows, a siphon of Vichy water, or the genera-

tion of any gas. We are indebted, says the writer, to Forest, of New York, for careful observations upon the amount of pressure which the intestine will sustain. The intestine, he has found, will sustain without injury six pounds to the square inch. Great pressure may be obtained with a column of water according to a well-known hydrostatic law. The elevation of the receptacle each two feet and a half will add a pound of pressure to each square inch. Steady, and efficient pressure may be obtained, therefore, by proper elevation of the bag of a fountain syringe. It may safely be held twelve feet above the patient, but less pressure should be tried first. Such pressure has the great advantage of being applied in every direction. It distends the sac, and exerts force upon the tissues which cause the obstruction at the neck of the invagination. After the end of the second day it is unwise to use so much force, for the bowel by that time may have become softened and weakened.

In giving the injection, the writer goes on to say, the child is anæsthetized and the hips are elevated. A large sized tub is used, and the rectum is occluded by means of a bandage wound about the tip of the tube in the shape of a cone. The pressure, graded by the elevation of the bag, should be steadily applied for thirty minutes. The greatest gentleness should be observed throughout. Should these measures fail when conscientiously carried out, laparotomy should be performed, although the results of this operation have not, on the whole, been encouraging. They have been somewhat more satisfactory, however, he says, during recent years, and great improvements in the results will undoubtedly be obtained by operating earlier under strictly aseptic methods.—*New York Med. Jour.*

THE VALUE OF STRYCHNINE IN OPIUM POISONING.

September 10, 1893, I was called to see a little boy, 4 years old, who had swallowed about an ounce of the tincture of opium. The fact that he had swallowed the drug was not noticed until a half hour later, when he was found in a dazed condition. The fears of the family were confirmed by the empty bottle.

I arrived about an hour and a quarter after the ingestion of the drug. Before my arrival, the family had given the patient warm milk and mustard water, in the hope of producing emesis, but they were not successful. This fact, however, was an important one in the prognosis, as the milk and water greatly diluted the unabsorbed laudanum in the stomach, and, of course, its absorption was slower. When I arrived, the frantic parents were with great difficulty and failing success endeavoring to keep the boy awake. All the characteristic symptoms of opium poisoning were present, and the little patient was fast becoming insensible, which he was entirely in few minutes later.

Before insensibility took place, I succeeded in emptying the stomach by an emetic of zinc sulphate and ipecac, which I gave simply because they were the most convenient agents that I had at hand. The child's respirations were very irregular, and at the rate of about 7 to the minute. The heart's action was weak, irregular, and about 15 beats to the minute.

As soon as possible, I administered $\frac{1}{60}$ grain of strychnine sulphate hypodermically and carefully watched the symptoms for effect. At the end of half an hour I perceived no favorable effect; instead, the child steadily grew worse. The respirations were very spasmodic and their rate about 10 to 12 per minute. I then adminstered $\frac{1}{120}$ grain of strychnine, but, excepting a quickening of the heart-beat for a few minutes, I perceived no response. The respirations, now were short and averaged 3 per minute; sometimes the interval being over a minute, producing marked asphyxia. The heart-beat was not perceptible, either by wrist pulse or by ascultation over the heart region. Regarding the case hopeless, and expecting death to occur momentarily, I resolved to act on desperate chances, and gave $\frac{1}{120}$ grain of strychnine hypodermically; in about five minutes I felt the pulse at the wrist again, the respirations increased to 4 or 5 per minute, and in a few minutes more increased to 7 or 8, with increased volume, causing the disappearance of asphyxia. After continuing in this state for about three quarters of an hour, these favorable symptoms began to recede, both respiration and heart-beat diminished.

In an hour after the last dose, I injected another $\frac{1}{120}$ grain, with the same effect as the previous dose; in fifteen minutes it brought up the respiration to about 8 per minute, and the heart-beat to 20 per minute. The pupils during this time were as firmly contracted as ever. This rather favorable condition continued for about two hours, varying, however, at times. Symptoms of relapse now began to show themselves again, but were not so marked as before.

Being rather timid about the cumulative effects of the strychnine, I decided to wait until the symptoms more urgently demanded heart and respiration stimulation; accordingly, two and a half hours after the last dose, I injected $\frac{1}{30}$ grain strychnine; the results were almost immediately perceptible in the increased frequency and fulness of respiration, being now about 10 per minute. The heart-beat was 50, had considerable tone and was regular. In about half an hour after the last dose, spasmodic movements of the extremities were noticed, the patient seemed to

be in a natural sleep, with occasional twitches of the hands and face, which, after a little while, became very prominent. He continued in this condition for about three hours, when he began vomiting, and then spasmodically passed some urine. He was now partly conscious and asked for water, which I gave him. I remained with him for an hour longer and then left, assured that he would make a good recovery, which he did, excepting an acute attack of gastritis, due to the last dose of zinc sulphate being retained in the stomach.

The lessons learned from this case I consider as most valuable, confirming, as they do, the value of strychnine as a powerful heart and respiration stimulant, and especially in this rather common form of poisoning.

It is impossible to determine how much of the opium was absorbed, but as it was taken on an empty stomach, in all probability a quantity sufficient to cause his death, without medical aid, was taken into the circulatien. This fact is the more probable because the vomited matter did not possess the odor or appearance of laudanum.—J. Howard Seiple, M.D., in *Philadelphia Polyclinic.*

WHY IS THE ABDOMEN OPENED IN THE MIDDLE LINE?

In text-books on abdominal operations the linea alba is always recommended as the proper site for the incision, or in default, the linea semilunaris. From this fact and from the unanimity of opinion which appears to be held by operators on the subject, one would naturally suppose that there must be some great advantages to be obtained from opening the abdomen in one or other of these situations. On inquiry I found they are as follows: (1) vascularity is low in the middle line, and therefore the hæmorrhage is less; (2) there are fewer and less important structures to cut through; and (3) there is greater facility of access to all parts of the abdominal cavity. As regards (1) this advantage is imaginary and is really a disadvantage, for, although the abdominal wall is more vascular in other situations, yet there is never any hæmorrhage in incising the abdominal wall elsewhere but what can be easily and speedily controlled, and. moreover, it is this absence of vascularity which tends to delay rapid and permanent healing, and therefore predisposes a hernia. (2) is also a disadvantage, for the whole depth of the incision being through tendinous or fibrous layers having a great similarity to one another renders it difficult, especially to young operators, to know exactly the depth of the incision. This is especially the case when there has been inflammatory action. It is difficult to get the layers exactly together again, and they always cohere, so that the depth of the scar when formed is barely one eighth of an inch thick. This is noticed especially when making an incision through the scar of a previous incision. (3) is the only valid argument that can be used in favor of the median incision, and, as I can show, is theoretical rather than practical.

A disadvantage of the median incision is that should it be necessary to extend it upwards the umbilicus comes in the way, and as it cannot be rendered aseptic with certainty, it has to be avoided and the incision deflected, while some operators remove the umbilicus entirely. This being so, is there any situation in the abdominal wall which offers further advantages, without these disadvantages? I think so, and that the ideal incision for abdominal section is one vertically through the middle of the rectus muscle on either side, and for the following reasons: (1) Although the parts are vascular there is no hæmorrhage; if the epigastric artery is cut, it is easily secured, and this vascularity tends to rapid and efficient healing; (2) there is no injury to the muscle, for after the fascia is divided the muscular fibres are easily separated with a director and retracted; (3) the incision can be made in any part of the muscle and continued up to the ribs or down to the pubes in the same manner; (4) the umbilicus gives rise to no inconvenience; (5) the layers are so well marked that it is impossible with ordinary care to wound the viscera; (6) access to all parts of the abdominal cavity is just as easy as in the middle line (this I have found from experience, whilst in some cases, where tubal or ovarian disease is known to be only on one side, it is an advantage to have the incision slightly on that side); (7) the scar left looks as if there had been a skin incision only—it does not pucker or dip in like the ordinary scar, and the separate layers are not coherent; and (8), most important of all, if the wound is properly closed the risk of hernia is reduced to the least possible minimum. The best method is to close the wound with silkworm-gut sutures, running through all the layers. These are placed *in situ* and held by forceps; then the peritoneum and posterior layer of fascia are brought together with fine silk sutures, either continuous or interrupted, and then the anterior layer of fascia in the same manner. This brings the muscle firmly together, making the passage through its fibres valvular, restores the natural thickness of the abdominal wall, and prevents coherence of the fascial layers, leaving the abdominal wall in as good a condition as before the operation. Should temporary drainage be essential, the necessary sutures should be placed *in situ* and marked with knots. They can then be drawn and tied accurately when the tube is withdrawn. Even if drainage has to be continued for some time, the track running through a thick wall will close

better and more firmly and be less likely to give way afterwards. I have adopted this incision during the past two months in five cases—viz., two ovariotomies, one tubal gestation, one pelvic abscess, and one cholecystotomy—and have found that these advantages claimed are real and practical. I am convinced that if some surgeons of higher standing than myself would give this matter their careful consideration this incision would be generally adopted, and that students would be taught that the one place to be avoided in opening the abdomen is the linea alba.—F. Winson Ramsay, M.S. Durh., F.R.C.S., Edin., in *Lancet.*

THE CRIMINAL BRAIN NOT NECESSARILY DEGENERATE.

At the Philadelphia Academy of Natural Sciences the subject of degeneration was discussed recently by the Section on Anthropology. Dr. Charles K. Mills presented the brains of three murderers and demonstrated in them the abnormalities in the course and development of convolutions and fissures, apparently showing a reversal to the brain conformation of anthropoid apes. Two of the murderers were insane, which also was indicative in the mind structural peculiarities.

Dr. M. V. Ball dwelt upon the distinction between the "degenerate" and the "atavistic" brain, the former being pathologic; the latter the result of reversion to a lower type. Idiots, insane and epileptic subjects belong to the degenerate class, while, according to Lombroso, born criminals are the result of a halt in evolution, or what is termed reversion. Some criminologists maintain the view that the changes are due to faulty nutrition, and as criminals are usually of the pauper classes, the fault, in that case, would be primarily social.

Prof. D. G. Brinton declared that because a man's brain showed characters of a lower type, it need not be inferred that he was necessarily criminally inclined. The lower races are often as ethically elevated as many civilized races, and furthermore, men of honest habits may possess brains exhibiting the anomalies referred to. Crime is not so much the result of anatomic, as it is of social conditions; if it were solely physical, we could do little toward improvement, whereas we know that crime can be reduced by better social advantages and an improved environment.

Professor Cope expressed his belief that physical organization does control action, but an unfavorable environment acts by developing degenerate and physically inferior individuals. Society may do much toward improving the human race by preventing the physically degenerate from reproduction.

Prof. L. Witmer exhibited a cast of the brain of Laura Bridgman, who in the physical sense was a degenerate, though morally and intellectually of high culture and development. Some of the characters of the alleged criminal brain were present, and there was deficient development of the centres in the cortex where the faculties of sight, speech and hearing have been located, showing that degeneration here was to be traced to disease of the sense organs.

Prof. Ernest Laplace said that he had examined the brain of Gambetta shortly after his death, and though a very small brain, comparable in size to that of an idiot, it was strongly developed in the region of the speech centres, which corresponded with his great oratorical ability during life. Criminality, according to Professor Laplace, is an exaggeration of selfishness, and he suggested that a centre for selfishness may some time be determined.

Prof. Harrison Allen spoke of the non-permanence of peculiarities of brain structure, and said that they constantly tend to return to an earlier type of formation. Man is a domesticated animal, and like other domestic animals has a tendency to revert to a more primitive condition. He maintained that because ape-like characters are found in a brain, we have no right to assume that the person's actions during life were ape-like, any more than we have to assert that those which showed features which are found in the hog are necessarily hog-like. The brain may exhibit apparent abnormalities or peculiarities without proving anything against the moral character or mentality of the owner.—Ed., *Jour. Am. Med. Assoc.*

MEDICAL NOTES.

Acne Rosacea.—Freeze the part with a rhigolene spray or ethyl chloride, and freely scarify with a five-bladed knife. This treatment gives prompt relief.—*Cantrell* (*Medical Record*).

After much Smoking the mouth feels like a furnace. To relieve this add to half a tumblerful of water a teaspoonful of a solution of salol, 4 grains; tincture of cacechu, 20 minims, in an ounce of any nice aromatic tincture and use as a wash.—*Chemist and Druggist.*

For Acne Vulgaris (Boeck, *Monatsh., f. prakt. Derm.* in *Med News*:—

R.—Camphoræ,

Acid. salicylic, āā . . .	ivss-vijss.	
Saponis medicin., . . .	gr. xv.	
Zinci oxidi, ...	ʒ ss.	
Sulphur-præcip., ...	ʒ ijss.	
Olei physeteris, ...	ʒ iij.	M.

Fiat unguentum.

Sig.—Apply topically at night.

From the *Medical Record* we extract the following paragraphs:—

It should be mentioned, in the interest of *Antiseptic Purity* and suffering humanity, that a good, stout tooth-brush, plenty of water, and some antiseptic dentifrice, applied morning and night, afford a greater safeguard against many diseases than many people are aware.—*Sims Woodhead.*

If the patient is *unable to obtain sleep* during the early hours of the night, give trional; if he readily falls asleep upon retiring, but awakens too early, give sulfonal.

Chloral Hydrate is the *Hypnotic par excellence* when pain is not a prominent element in the case (Adolphus). I find it best to combine it with ammonia and strychnine, some ammonia salt, not alkaline; all alkalies are sure to bring about decomposition of chloral hydrate, thus making it utterly valueless as a medicament, especially as a hypnotic. Following is a good combination:

℞.—Chloral hydrate, ... gr. xx.
Ammonium bromide, . . . gr. xx.
Fl. ext. nux. vom., ... gtt. x.
Fl. ext. belladonna, ... gtt. ij. M.

Sig.—To be taken at once, and repeated in an hour or two if needed.

Asafœtida is a valuable remedy in *Insomnia* occurring in the aged.

My own experiments, as also those of Dr. Albu, at the Moabit Hospital in Berlin, and of others, have conclusively shown that creosote has no influence upon *Pulmonary Tuberculosis*, and particularly upon the growth and virulency of the specific germ. Apart from its influence upon the bronchial catarrh, creosote has a value in certain gastro-intestinal derangements, but the considerations for its preference are the same as they would be if the patient were not tubercular at all.—*Karl Von Ruck* (*Med. Rec.*)

CONSANGUINITY OF PARENTS IN RELATION TO IDIOCY.—Martin W. Barr, M.D., *Philadelphia Polyclinic*, says: Consanguinity is commonly accounted a fruitful cause of idiocy, but comparative investigation shows: First, children having both mental and physical defects, the offspring of healthy unrelated parents; second, perfectly developed children with no personal peculiarities whatsoever, the issue of consanguineous marriages. This would lead us to accept the statement that consanguinity has but little, if any, influence in the production of idiocy, unless there be some hereditary neurosis.

Heath maintains that if the blood be pure and uncontaminated there will be no bad results from such marriages.

A confirmation of this may be found in the history of the Hebrews, which gives repeated examples of consanguineous marriages where the intermingling of pure blood give only good results, and iodiocy is the exception rather than the rule.

The statistics that have been gathered by the author run thus: In 1865 the population of Batz, Brittany, numbered 3,300. Five marriages took place between cousins-german, thirty-one between second cousins, and ten between those of third degree.

The issue of the cousins-german was twenty-three children, free from all disease both mental and physicial. The second cousins had 120 children, normal in every respect; and the issue of the cousins of the third degree was twenty-nine children, also perfect. Two women were sterile. But insanity, idiocy and nervous diseases were unknown in this community.

Dr. Kerlin found but 7 per cent. of his cases examined directly traceable to consanguinity.

In the author's examination of 1,044 idiots he found but 3⅓ per cent. On the other hand, consanguineous marriages, where there is the least neurotic taint, must always be marked by deterioration of mental power. Naturally, if the taint exists in both parents, the force is but intensified, and idiots are likely to be produced with peculiarities accentuated. A notable example of this is found in Switzerland, where, among the people secluded from the outer world in mountain fastnesses, intermarriage has been going on for centuries. Here, by repeated intermarrying, neuroses are preserved intact, and idiocy ripens.

Frequently idiocy appears as the outward and visible sign of the mental deterioration of a family where intermarriage has been frequent, especially one that has been noted for its intellectual qualities, and, according to Griesinger, it is a mark of degeneration in a race whose blood has stagnated. —*American Medico-Surgical Bulletin.*

HYSTERIA.—The Medicinisches Doctoren-collegium had under discussion Frend's paper on hysteria. Mittler said that he had expected a more exact definition than Frend had given to separate it from neurosis. From an abundance of experience and examples we are yet unable to say what hysteria is. It cannot be attributed to sexual cause alone, although older writers placed great value on this form of genesis, whence the name has arisen. We meet with it, though probably indirectly, from shock, fright, anxiety and other similar causes which pass along the psychical path. Grossman was pleased to record the number of explanations and elucidations of hysteria during the past, but in practice the differential diagnosis was still a difficulty. The hysterical throat affection still remained our guiding star. Anæsthesia of the conjunctiva,

tongue, mucous membrane of the nose and throat pointed to hemiplegia of the mucous membrane of the larynx. The hysterical cough and choking phenomena are frequently marked in literature as the true augur of the disease. The hysterical morbid movements of the larynx are divided into two groups, the first occurring in the region of the laryngeal recurrent nerve, the other in the superior. The first and more common form appears as a paresis where the glottis is found flabby with the vocal cords and surroundings normal. By deep inspiration the vocal cords lie over one another, while phonation produces a flabby opening. In this state the patient speaks with a hoarse voice. This form of paresis never appears as paralytic, but if left alone will suddenly disappear. A patient relieved from this condition by hypnosis suddenly returns to her former condition through displeasure or emotion. Another point to be noted in the character of the hysterical paresis is the constant bilateral condition. On meeting with unilateral paresis of the vocal cords, even in a very hysterical person, would leave us to view the lesion as serious.

Mittler mentioned a notable case in a woman, aged 32, who, for the last ten years, had gone the round of every neuropath and laryngoscopist in Vienna, everyone of whom treated her, and was convinced that hysteria was the sole cause of her trouble. Recently, however, the hoarseness and difficulty of swallowing appeared to have increased. Sometimes she could swallow fairly well, but immediately complained of a rising or swelling in the throat, as if a ball were choking her, which was conclusively accepted as globus hystericus. Examination of the larynx showed right paresis, but no cause could be forthcoming for this exceptional condition. In the course of time it became paralytic, the other side being somewhat affected. The paralytic cord assumed a red uneven swollen condition, which led to a closer diagnosis and final discovery of carcinoma in the œsophagus.

The second form of hysteria is where the vocal cords go together during inspiration, and during phonation overlap. Notwithstanding this hypermotility, the patient is aphonic. Where there is difficulty in swallowing, care should also be taken in the diagnosis of these cases. Brawer agreed in much that Frend had said, but presumed that he entertained the old opinion that many of the hysterical symptoms arose in the sexual sphere or had their origin in close proximity. Whatever the source, we in practice usually prescribe iron in some form when a female comes to us complaining of langour, exhaustion, and paresis, presuming that anæmia is the cause, but the source of the latter is usually taken for granted, for not a question is put to her concerning the sexual organs. — *Vienna Cor. Med. Press and Circular.*

The Walscher Position for Labor.—It has long been known that there is a certain amount of mobility in the joints of the pelvis, especially during pregnancy. But it remained for Walscher (1889) to show that the antero-posterior diameter of the pelvic inlet varies with the position of the body. The sacro-iliac synchondroses are true joints with synovial membranes, articular cartilages, and strong supporting ligaments. The innominate bones revolve to a limited extent about the sacrum, upon an axis passing through the sacrum several centimeters below the level of its promontory, and Walscher found that when the pelvis is, as it were, extended, the conjugata vera is from nine to fifteen millimeters longer than when flexed upon the trunk. The universal position of a woman, when forceps are applied, has been upon the back or side, with the thighs flexed upon the abdomen; in this position the symphysis pubis approaches the promontory of the sacrum, and the true conjugate of the pelvic inlet is shortened six or seven millimeters. On the other hand, if the thighs are forcibly extended, with the patient upon her back and her lower extremeties hanging down over the edge of a table or bed, considerable traction is exerted upon the anterior portion of the pelvis; it is forcibly extended, and the conjugata vera is lengthened six or eight millimeters.

The increase in length, therefore, of the antero-posterior diameter of the pelvic inlet in the Walscher position over that in the position universally assumed, is from one to one-and-a-half centimeters. By placing women in this position in the first stage of labor, Fehling and others have secured spontaneous births in cases where forceps or other instrumental means had been necessary in previous labors. It must be borne in mind, however, that the Walscher position is of value only when the head is at the superior strait; after a head has entered the pelvic cavity this position should be dispensed with, as by the sinking in of the lower end of the sacrum and coccyx the antero-posterior diameter of the pelvic outlet is shortened. —*Am. Gyn. and Obs. Jour.*

The Cost of a Criminal Family.—Improvement of the social status of our population and attempts to lessen pauperism and criminality are matters of general and widespread interest. Practical measures are needed to counteract inherited tendencies in certain families, as well as in the cases of habitual drunkards and frequent offenders. The suggestion of such measures is generally met with the objection of their costliness to the public, without regard to the expenses thrown upon the public purse by the existing degraded portions of the population

as well as in other ways. The chief constable of Chester has given the record of John Ogden, recently dead, who made 130 appearances before the city justices; 86 being for drunkenness, and 44 for assaults. Ogden's father appeared before the bench 35 times, a sister 67 times, and another sister 29 times. The father, son and two sisters were charged 347 times; it has been estimated that in the expenses of prosecution, prisons, and poor-law maintenance, the Ogden family has cost the City of Chester £2,000. Such cases are frequently met with, and demonstrate the grave importance of accurate inquiry as to the physical and mental conditions of the population. Inquiries conducted by a committee of the British Medical Association show that many such cases may be detected in our schools; which provision for their proper care in early years and subsequent provision might prevent much evil. The consideration of the mentally and morally feeble portions of the population claims the early attention of the Government.—*Brit. Med. Jour.*

THE HYSTERICAL BREAST.—Tourette, *Journal de Mèdecine*, describes a condition of the breast under the name of hysterical breast, which he considers of much importance, not only as it is a well-defined manifestation of hysteria, but also from the fact that it has given rise to errors in diagnosis and needless removal of the organ. It consists of a temporary enlargement of the breast with considerable hyperesthesia of the skin covering the organ. This hyperesthesia, liable to vary, becomes much more marked during the menstrual flow; there is then, also, more swelling, and considerable pain is complained of. On palpation at such time it is possible to perceive one or two tumor-like masses in the substance of the breast, about the size of a hen's egg, but which are not painful, the hyperesthesia being cutaneous. The affection is often of long duration, especially in those cases where there is faulty therapeusis, as often happens. It seems to depend on a hysterogenous band of hyperesthesia at the level of the breast, which induces an œdema of the connective tissue of the gland. In this way are produced the local swellings.—*Univ. Med. Mag.*

PILOCARPINE IN NEPHRITIS—French physicians have for some time past been treating cases of ordinary nephritis by regular inunction with an ointment made of nitrate of pilocarpine and white vaseline, of the strength of one part of the former to one thousand or two thousand of the latter. This is applied by friction to the skin of the trunk, which is then enveloped in a layer of cotton wool, the application being repeated on the following day, unless such free perspiration is excited as to render the earlier removal of the dressing advisable. It is stated that almost immediately the patient experiences a feeling of marked relief, with very abundant perspiration, which is at first neutral in reaction, but afterwards becomes acid; that this is accompanied by marked diuresis, but no salivation; and that, under this treatment, the albumen in the urine, in acute cases, disappears rapidly and the patient quickly recovers. In chronic cases, the œdema is said to disappear, the albumen to diminish, and the general health of the patient to become markedly improved. A large number of cases have been treated by this method, the best effects being obtained in patients suffering from acute or sub-acute nephritis; but it is asserted that the drug is perfectly harmless when thus employed, even in advanced cases, although in such, naturally, the results are not so satisfactory.—*Med. Times.*

A CONSTANT SIGN OF COMMENCING MENINGITIS.—This consists in the inharmonious movements of the chest and diaphragm. It exists from the beginning, and may serve to reveal it even in insidious cases. It requires careful searching. The chest and abdomen must be bared, but not suddenly, or the hyperæsthetic skin will take on accidental movements from the action of the air.

In the first period of meningitis we see irregularity of rhythm and then remark the inequality of the amplitude or development of the chest. Another sign is the irregular type of respiration and dissonation of the movements of chest and diaphragm. The respiration is effected by the lower respiratory muscles of the chest. Looking at the umbilical region, instead of the normal elevation with each inspiration, there is either immobility or depression. These movements are not connected with the Cheyne-Stokes type of respiration.—*Times and Register.*

METHYL CHLORIDE AGAINST THE FALLING OUT OF HAIR.—The refrigerating property of the spray of compressed methyl-chloride has been employed by Dr. Tsakiris ("Pham. Ztg.." XL, p. 474) to promote the growth of hair. He was moved to try it by the hope that the rapid cooling off of the tissues of the scalp, and the attending stimulation of the vital functions, would assist the growth of hair and give it new life. His experiments seem to have borne out his expectations. He proceeded by spraying, once a week, a small quantity of the remedy upon the bald spots, and observed, that after but one month's use, the hairless portions of the head became again covered with fine hair, and that the falling out of the hair diminished considerably, it is reported.

A THEORY OF RHACHITIS.—Wachsmuth (*Jahr. buch f. Kinderheilkunde*, Bd. xxxix., Hft. 1, S. 56) concludes an elaborate paper on the theory of rhachitis by stating that the conditions for the

precipitation of lime-salts in normal growing bone are: (*a*) the presence of fully developed cartilage cells, and (*b*) the presence of carbon dioxide in the tissue of the cartilage and bone in quantity not sufficient to hold the lime-salts in solution, or to redissolve them when precipitated. In rhachitis both of these conditions are incompletely fulfilled and in inverse proportion to the gravity ot the disease, there being an abnormal developmenf of the small-cell elements of the cartilage with scarcity of the fully developed cells, while at the same time the free carbon dioxide of the blood is increased. In other words, rhachitis is a chronic carbon dioxide poisoning—an asphyxia of growing bone.—*Am. Jour. Med. Sci.*

Excision of the Vas Deferens for Prostatic Hypertrophy.—Pavone *(Il Policlinico)* has made a series of experiments on dogs with regard to the effects of removing the testes or the vas deferens alone. He finds that bilateral excision of the vas deferens in dogs brings about the same atrophy of the prostate as castration. Drawings of the microscopic appearance of prostates after castration and excision of the vas deferens respectively, show that practically the same changes occur after both operations. The author therefore recommends the excision of the vas deferens for prostatic hypertrophy in preference to castration, as being a simpler operation, causing less mutilation and less mental shock to the patient, and giving equally good therapeutic results. —*Brit. Med. Jour.*

Chronic Coffee Intoxication.—In a recent paper read before the Société des Hôpitaux, Gilles de Tourette (*Gazette Médicale de Paris*), calls attention to the fact that chronic coffee-poisoning is much more common than is generally supposed, and is generally confounded with alcoholic disturbances. The poison acts principally on the stomach and the nervous system. The coffee dyspepsia resembles the alcoholic very much; there are as symptoms, morning expectoration of mucus, pain in the epigastric region, and marked anorexia. The disgust for food finally becomes so great that the patient can only take coffee, or bread soaked in coffee, and in this manner the poisoning rapidly increases in severity; nausea and vomiting, with acid pyrosis next appear, and the patient becomes much emaciated. On the side of the circulation a slowing of the pulse is usually observed, palpitation being rare. The nervous symptoms are marked. Insomnia is common, or if sleep occurs it is often accompanied by terrifying dreams. General tremor is often present, with fibrillary twitching of the lips and tongue. Cramps in the limbs may occur. The general sensibility is diminished in a certain number of cases. Paralyses have not been observed. In children, arrest of development takes place. The stoppage of the coffee generally results in a rapid cure, much more rapid than from similar troubles due to alcohol.—*Am. Jour. Med. Science.*

Treatment of Cystitis.—Frendenberg (*Clinical Jour.*) has tried cantharidine in fifty-six cases of cystitis. The formula used was cantharidine 0.001 (—1 mg.), alcohol ad solvend., 1.0; aq. destil., ad 100. A teaspoonful of this was given three or four times a day; larger doses did not succeed if this failed. Results:

1. In five cases no improvement; of these only one was afterwards cured by local treatment (cases of vesical tuberculosis, contracted fibrous bladder, etc.).

2. In nineteen its action was slight, or even doubtful the strangury alone being improved, or the urine clearing without the cure being complete. In one of these the cystitis was due to perforating silk sutures after laparotomy, and the strangury was alone improved; in another, the bladder had diverticula; some remained, however, in which the drug failed without apparent cause; for example, in one case of gonorrhœal cystitis, afterwards cured by sandalwood oil.

3. The remaining thirty-two cases were completely cured, often surprisingly quickly. In three cases of gonorrhœal cystitis, cantharidine succeeded where sandalwood oil failed.

Conclusions: Cantharidine is approached only by sandalwood oil in its action in cystitis, and the latter is to be preferred if urethritis is present. (2) Its advantages are its cheapness, tastelessness, and almost complete freedom from unpleasant symptoms, at least in the above-given doses, frequent erections being noticed only once (after use for ten days), formication once. Disordered digestion or albuminuria never occurred.—*Charlotte Med. Jour.*

Headaches of Extra-Cranial Origin.—In the discussion following the reading of this paper, Thomas Hunt Stucky, M.D., Ph.D., Professor of Theory and Practice and Clinical Medicine, Hospital College of Medicine, Louisville, Ky., said: "The paper just read is to me one of unusual interest and importance. When we take into consideration the many causes of headache, and look back upon the treatment for the past twenty years for the condition by opium or its alkaloids, chloral, the bromides, etc., and remember their tardiness of producing relief, the danger of having our patients become drug-habitues, 'tis indeed, a fact that antikamnia has proven a God-send to the people, as well as the profession. One fact is evident, and that is that antikamnia has almost entirely displaced opium, its compounds and derivatives. If it has done this and nothing

more, its mission is a great one and its usefulness thoroughly established. 'It does not depress the heart's action; it does relieve pain. An extended use from its appearance on the market has served to increase my confidence in the great value of antikamnia.'"—Frank Woodbury M.D., Philadelphia, before the Mississippi Valley Med. Assoc.—*Medical Record.*

A NOTE ON THE THERAPEUTIC VALUE OF SILVER NITRATE. (*Dublin Medical Journal.*) In a short paper the writer relates the details of a case of locomotor ataxia, which was very markedly improved under the use of silver nitrate. Although the silver was given with much caution, and frequent and prolonged interruptions, argyria ensued. He concluded that no precautions can guard against the staining that follows the prolonged use of silver, but excepting the staining, silver nitrate appears to produce no injurious symptoms. At the same time no drug had the same beneficial action upon the symptoms as had the silver nitrate. The case was under observation for more than twenty-three years. The ataxic and neuralgic symptoms gradually disappeared under the use of the drug. On its discontinuance they returned after an interval, but vanished again and again on resuming the nitrate. Dr. Tweedy says, "It is now more than ten years since he showed any definite symptoms of ataxia. He has none whatever at the present time, and I think it may be fairly conceded that the discoloration of the skin has not been an extravagant price to pay for the benefits he has derived from the use of the drug."—*Internat. Med. Jour.*

NERVE LESIONS IN HERPES ZOSTER.—Ebstein reports (*American Journal Med. Sciences*) a case of herpes zoster with facial paralysis and another sensory disturbances. He agrees with the view of Recklinghausen that there is a primary affection of the vaso-motor nerves, the vaso-dilators being irritated, and he looks on the herpes as an intense angioneurotic disturbance which may be of sensory, spinal or cerebral origin. The rare appearance of herpes in cases of motor disturbances and the cause of the paralytic phenomena in motor nerves and of symptoms of irritation in sensory and vaso-motor nerves cannot be explained. In most cases the disease results from causes acting on the body in general, though trauma and cold may assist. It is possible that infection or auto-intoxication plays a part. The tendency of certain parts of the nervous system to herpes zoster may be due to predisposition of these parts to the special exciting causes.—*Medical Standard.*

SLEEP FOR CHILDREN.—A German specialist says: "Nature has recently pleaded for giving children more sleep." A healthy infant sleeps most of the time during the first few weeks, and in the early years people are disposed to let children sleep as they will. But from six or seven years old, when school begins, this sensible policy comes to an end, and sleep is put off persistently through all the years up to manhood and womanhood. At the age of ten or eleven the child is allowed to sleep only eight or nine hours, when its parents should insist on its having what it absolutely needs, which is ten or eleven at least. Up to 20 a youth needs nine hours sleep, and an adult should have eight. Insufficient sleep is one of the crying evils of the day. The want of proper rest and normal conditions of the nervous system, and especially the brain, produces a lamentable condition, deterioration in both body and mind, and exhaustion, excitability and intellectual disorders are gradually taking the place of the love of work, general well-being, and the spirit of initiative.—*N. Y. State Med. Rep.*

Watertown, S. D., Dec. 10, 1895.

BATTLE & Co., St. Louis,

Some time ago you sent me specimens of your preparations of Bromidia, Papine and Iodia. Unlike many who send out specimens, you sent an amount large enough to really make a trial with. I had used the first named a little, but having them more forcibly brought to mind, and recognizing the fact that I had them on trial, I watched their action more carefully. I can say that they are both elegant and health bearing. Bromidia I used on a man verging on Mania a Potu. Papine on a nervous Typhoid woman, and Iodia on a young man, who had carried boils for three years as the result of ivy poisoning. The preparations were a decided success in every instance.

Yours truly, E. C. ADAMS, M.D.

MINDIERE, in the *Revue Medicale*, directs attention to the influence of malaria on the viscera and its expression in severe hiccough. In support of this a case is reported of a countryman who, recovering from an attack of ague, was seized with a violent hiccough which, in spite of opiates, blisters, and antispasmodics, persisted for nine days, when it disappeared under enemata of quinine.

EDWARD BOK'S book, "Successward," has just exhausted its first edition of 5000 copies, with orders in the publisher's hands for several hundred copies of the second edition, which is now being printed. An English edition of the book is published in London this week, simultaneously with a special reprint in Edinburgh.

"THE COLLEGE AND CLINICAL RECORD" will be hereafter known under the name of "*Dunglison's College and Clinical Record*, a Monthly Journal of Practical Medicine."

THE CANADA LANCET

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* DR. J. L. DAVISON, 12 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Letters and Remittances to be addressed to* ARTHUR A. ADAMS, Gen. Business Manager, 11 Colborne Street, Toronto.

AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John N.B.; Canadian Advertising Agency, 60 Watling St London. 5 Rue de la Bourse, Paris.

Editorial.

ANNOUNCEMENT.

At the close of what has been an exceedingly prosperous year for THE CANADA LANCET, we are pleased to be able to announce to our patrons the completion of arrangements which we trust will greatly enhance its value to the general practitioner, as well as to those whose labors are directed in special lines. We are determined at the same time to maintain in every respect the high standard, and thoroughly practical character, now held by this Journal for over a quarter of a century.

By special arrangements made with some of the best known American writers, we shall be enabled to give a larger number of original articles than heretofore in each volume.

We also propose increasing our reading matter from thirty-two, to forty pages, double column, which is equal in amount to nearly *sixty pages* of single column.

Another feature will be the introduction of cuts illustrating as fully as possible the letter press, wherever this may be possible. Indeed our new series will, we hope, be in every way an up-to-date medical journal.

The former business manager, Dr. Sheard, has retired, owing to press of work as City Health officer of Toronto, and his interest has been purchased by Dr. G. P. Sylvester, who will now take the duties of that post.

The editorship will be, as heretofore, in the hands of Dr. J. L. Davison, who will be assisted in the several departments of Surgery, Midwifery and Gynæcology, Throat and Nose, Pathology and Bacteriology, and Electro-Therapeutics, by the best men obtainable, whose names will appear in the next and new issue.

No pains or expense will be spared, that this Journal shall contain a *resumé* of the latest researches in the various departments of scientific medicine, and of medical news of general interest to the profession.

THE CIGARETTE HABIT.

While the subject of the evil of cigarette smoking, especially among those of tender years, is an old one, there can be no doubt that there has been no clear scientific investigation into the habit until quite recently, when Dr. Mulhall, of St. Louis, Mo., himself a cigarette smoker, discussed the matter in a very thorough and scientific manner before the leading members of the profession in his own city, and before the American Laryngological Association, at its seventeenth annual congress.

He points out that the chief danger from cigarettes is due to the fact that the devotee usually inhales the smoke from a desire to pleasantly irritate the laryngeal and tracheal mucous membrane. The mucous surface exposed to the action of nicotine, thus being much greater than in cigar or pipe smoking, the mouth being used as an air-chamber, the smoke being quickly expelled. Were cigarettes smoked in the same manner as a cigar, the smoke not being inhaled, they would be almost innocuous, but in their apparent mildness lies the chief danger, for two or three are smoked, where only one pipe or cigar is used, and the smoke passing into the first divisions of the bronchial tubes, not the lungs proper, as the laity believe, the fact of a tidal and residual air proving the fact, more nicotine is taken into the system from one cigarette than from a strong cigar smoked in the ordinary manner. Cigarette

smokers are, with few exceptions, inhalers, while the smoke of a cigar is too strong to be used in this manner.

Dr. Mulhall draws attention to the fact, that the cigarette habit is frequently formed at the age when the nervous system is undergoing its greatest developement, and thus causes a great deal of mischief.

It has long been the superstition among the laity, that the cigarette owed its chief danger to the fact of containing opium and other narcotics. The only chemist of high standing who has analyzed the cigarette is Dr. Ledaux, who presented the results of a careful analysis of all the leading brands of American manufacture, before the New York Academy of Medicine. In none did he find the slightest trace of any drug, and nothing but cellulose in the paper, opium and other drugs being too costly, as we all know, to be used for the purpose.

Dr. Ledaux explains that all the well-known symptoms from an over-indulgence in the habit, are due to nicotine poisoning and nothing else.

Dr. Mulhall agrees with the late Sir Morrell Mackenzie, that smoking cannot cause any serious disease of the respiratory tract, a slight hyperæmia or catarrh being the only result noticed after a careful study of the subject. In fact some of the finest operatic singers in the world are confirmed cigarette inhalers.

Summing up the matter, cigarettes are dangerous from the fact of being used at a tender age, from the smoke being inhaled, thus reaching a large mucous surface, with concomitant nicotine poisoning, and not from their containing opium or cannabis indica as was thought, even by medical men.

MALIGNANT DISEASE OF THE UTERUS.

In a paper recently read before the New York Academy of Medicine, by Dr. Paul F. Munde, and published in the *Medical Record*, a somewhat peculiar position is taken. His report covers a period of 12 years' gynæcological service at Mount Sinai Hospital. He gives the entire number of patients received in the hospital as 4,211, their diseases consisting in part of laceration of the perineum, fistula, cervical laceration and cancer. He refers particularly to the results in lacerated cervix, claiming that nearly all cases of epithelioma are the result of these lacerations. He most vigorously condemns hysterectomy, both vaginal and abdominal, in the vast majority of cases. He says that out of twenty-six cases of vaginal hysterectomy with three deaths, not one of the patients had remained free from the disease longer than nine months, and in no case had life been prolonged more than two years.

He says: "I do not feel that my own experience justifies me in attempting again to remove a cancerous uterus, unless a thorough, careful examination (if necessary, under anesthesia) has convinced me that the uterus alone is involved and that the parametrium is absolutely free from disease. I do not see the use of subjecting the patient to the danger, discomfort, not to mention expense, of a hysterectomy, whether vaginal or supra-pubic, for the removal of her cancerous uterus, unless there are at least seventy-five chances out of a hundred in her favor for a permanent cure. Acting on this principle, I have refused many an operation which I have good reason to believe has afterwards been performed by others, who could not possibly have had any reasonable expectation of curing the patient. Many cases of cancer of the cervix, in which the patient does not bleed, and has only a comparatively trifling discharge, suffers no pain—in fact, hardly knows that she is afflicted with an incurable disease—many such cases, I repeat, should, I think, be left alone. The disease progresses more slowly, I am sure, if it is not interfered with, and when the disease is at once recognized to be incurable, what is the use of inflicting unnecessary pain and discomfort upon the patient? Simply palliative remedies will in such cases, it is my honest conviction, do much better for the patient than doubtful or hopeless operative proceedings."

Is it possible that Dr. Munde means to say that unless we can promise seventy-five cures out of a hundred, the patient should be permitted to die undisturbed, a result certain to follow such palliative treatment as he speaks of. We do not think he intended to make such a statement. We would operate on such cases if we could promise a 10 per cent. recovery; 10 per cent. cure is better than a 100 per cent. death-rate. We cannot believe that Dr. Munde made the remark, intentionally, as quoted.

ALCOHOLISM IN FRANCE.

The question of French degeneracy from alcoholism has agitated the public and professional mind of that country for the past eight or ten years, as is evidenced by the constant references to the subject in both the lay and professional press. From all sources comes the unwelcome and dreadful assurances that a *débâcle*, more to be dreaded than that pictured by Zola, is at hand. In all civilized countries stimulants are more or less abused, to the undoubted deterioration of the race, but France for the past few decades seems to have gone further than any other nation on the downward path. Not long since Dr. Lannelongue, a member of the House of Deputies, and Professor at the Academy, made a strong appeal against the laxity of the laws concerning the manufacture and sale of alcohol in France. Among other statements made by the learned speaker he said, *Med. Press*, that alcoholism at the present day was not only endangering the public health, but also threatening the very existence of the species; it filled the hospitals, the asylums, the prisons, and populated the penal settlements. Previous to 1850, alcoholism was almost unknown, or rather it had not the same character, the effects were temporary, because the drink taken was pure and natural. But four years afterward, alcohol of vinous origin failed, and immediately it was replaced by that derived from molasses, beetroot, and potatoes, which poisoned the race. In 1830 the number of suicides from alcoholism were 5 per 100,000 persons; they were 21 in 1881, while 46 per cent. of homicides, 74 per cent. of grievous wounding, 54 per cent. of family quarrels, 77 per cent. of outrages against public decency, were due to drink. Against the many afflictions which attack man, against the large number of contagious maladies, epidemic or other, the characteristic of the healthy individual is his organic resistance, which enables him to triumph over all the assaults from his most terrible enemies—microbes. The drunkard, on the other hand, has lost all resistance, and falls an easy prey to disease. At 40 he is already an old man; his tissues are degenerated, so that he makes the worst of patients. It is not the richer classes in France who saturate their bodies with alcohol, because they know better, but the lower classes, and especially the workmen, who are ill-fed, clothed and lodged. In Brittany, however, women of good position give themselves up to alcohol. Out of 107 young married women who died from drink, 8 were sterile, and of the 99 others there only remained as patients 6 sickly children. On the other hand, these same women had 28 children before having taken to alcohol, who are very healthy, showing what the others might have been if the mothers had led a sober life. What is still worse, continued Dr. Lannelongue, is the fact that the passion of the parents is transmitted to the children. The drunkard engenders an offspring with the same tendency, be they girls or boys, and curious to say, they begin to drink at the same age that the father began to drink.

This strong arraignment from one so well qualified to speak on the subject, suggests horrible possibilities to one of the greatest, indeed in many respects, *the* greatest nations of the earth.

THE ANNUAL MEDICAL BANQUETS.

The Trinity Banquet was held at the Rossin House, November 28th, and was by far the most successful of a series of nineteen. Besides members of the Faculty, many prominent men were present as guests, among whom we noticed His Honor the Lieutenant-Governor, Sir C. Hibbert Tupper, Hon. G. W. Allan, Provost Welch, Senator Ferguson, Walter S. Lee, Hon. G. W. Ross, Chief Justice Meredith, Hon. J. Beverley Robinson, O. A. Howland, M.P.P., Dr. A. R. Pyne, Rev. Dr. Langtry, Dr. C. O'Reilly and Dr. G. A. Peters.

The chair was ably occupied by Mr. H. Clare, who roused the enthusiasm of Trinity's *alumni*, both young and old, by an eloquent, forcible and loyal speech. Among the other speakers of prominence were Sir C. H. Tupper, Hon. G. W. Ross, the Lieut.-Governor, Chief Justice Meredith and Dean Geikie.

The proceedings of the evening showed how the various committees must have labored to make the event so complete a success. Trinity may well be proud of the large body of young men who owe her a willing and hearty allegiance.

The dinner of Medical Faculty of Toronto University was held in the same place under the chairmanship of Mr. B. G. Connolly, on December 5th. We did not have the honor of an invita-

tion, and as we have not been favored with a report of the proceedings, can only say that some who were there pronounced it also a great success.

THE TREATMENT OF PILES.—Of the numerous methods which have from time to time been devised for the treatment of piles, Whitehead's operation has been perhaps, most discussed, vaunted, and decried. Kelloff has lately published a quick method of performing this operation which he has found highly satisfactory, *Ed. Med. Press.* The description of this modification is almost too long to insert in detail in these columns, but it consists essentially of 1. Preliminary dilation of the anus by a dilating speculum. 2. Traction by two assistants by means of forceps fixed at the junction of skin and mucous membrane, one opposite the coccyx. 3. Division of the skin by angular scissors, so as to form a semi-circular flap between the forceps on either side. 4. Dissection of these flaps by means of scissors. 5. Stitching of mucous membrane to skin by means of a runing catgut suture. Kelloff claims that a dexterous surgeon can thus complete the operation in ten minutes. Care must be taken not to remove too much skin, a mistake which results in a constant source of irritation from exposure of mucous membrane externally. While on the subject of Whitehead's operation, we might mention that, after an extended correspondence with surgeons of Europe and America, Andrews, of Chicago, has collected the following list of disasters following the operation: Loss of the special sense, by which the patient should be warned of a coming evacuation, and enabled to prevent it, 8 cases. Incontinence of flatus and fæces, 27. Paralysis of the sphincter, 4. Chronic inflammation of the rectum, 1. Failure of union of the wounds by first intention, with retraction of the edge of the wound, forming a contracting tubular ulcer, with stricture, 9. Other ulcers. 2. Irritable and painful anus, 12. Neuralgia of the pelvis and inferior extremities, 2. General neurasthenia, 1. Fatal peritonitis, 1. Fatal septic complications, 1. Non-fatal septic results, 6. Fistula in ano, 1. Cases reported as having bad results, without accurate description, 126. Total, 201. This is a somewhat ghastly list, and is calculated to make one think twice before carrying out Whitehead's procedure.

TREATMENT OF GONORRHŒA.—The results obtained in the treatment of these cases seem to warrant, according to Dr. Christian, of Philadelphia, the following conclusions, *Therap. Gaz.*: 1. That irrigation is a distinct advance in the treatment of gonorrhœa; in fact, up to a certain point it must be considered the proper treatment for that disease. It relieves *ardor urinæ* and chordee more promptly than any other form of treatment. It is attended with a much smaller proportion of complications, such as total urethritis and epididymitis. 2. That permanganate of potassium is the best remedy for the purpose of urethral irrigation. 3. That irrigation alone cannot be relied upon to absolutely cure specific urethritis. For the cure of the thin muco-purulent discharge which appears at the meatus in the morning, some astringent injection used by the patient himself is necessary. 4. That simple non-infectious urethritis can be cured in from ten to twelve days by daily irrigations with permanganate of potassium. The writer is of the opinion that, where it is possible to carry out irrigation of the urethra with permanganate of potassium solution twice daily, this procedure very materially lessens the duration of the disease. The solutions used were as follows: bichloride of mercury, 1 to 15,000, increasing the second week to 1 to 8,000; nitrate of silver, 1 to 6,000, increasing 1 to 3,000; permanganate of potassium, 1 to 4,000, increasing to 1 to 2,000; trikresol, one-half to one per cent.

THE TREATMENT OF CYSTITIS.—Trendelenberg, *Wiener klinische Wochenschrift*, *Univ. Med. Mag.*, has tried cantharidin in fifty-six cases of cystitis. The formula used was

℞—Cantharidin (Merck's), . . .	0.001.
Alcohol, ...	1.0.
Aquæ, ...	100.0.

A teaspoonful of this was given three or four times a day. Larger doses did not succeed if this failed. In five cases there was no improvement, and of these only one was afterwards cured by local treatment, the other four even resisted all forms of operative treatment.

In nineteen cases the action was slight or even doubtful, the strangury alone being improved, or the urine clearing without the cure being complete. In one of these cases the cystitis was due to perforating silk sutures after laparotomy, and the strangury alone was re-

lieved; in another case the bladder had diverticula; some remained, however, in which the drug failed without any apparent cause, for example, one case of gonorrhœal cystitis, afterwards cured by sandal-wood.

The remaining thirty-two cases were completely cured, often very quickly.

The author states in conclusion that cantharidin is only approached by sandal-wood oil in its action upon cystitis, and that the latter is preferable if urethritis is present.

Its advantages are its cheapness, tastelessness, and almost complete freedom from unpleasant symptoms, at least, in the above given dose. Frequent erections were only noted in one case, formication once, and an eruption once. Disordered digestion or albuminuria never occurred.

Melancholia Cured by Intranasal Operation.—Dr Bosworth has reported the interesting case of a man, aged forty-two, who became quite unfit for business from continually suffering from melancholy, sleeplessness, a bursting pain between the eyes, and a feeling as if the eyeballs were too large for the orbits, *Med. Press.* The treatments he went through at the hands of various physicians were many and varied, including operation for varicocele, wearing of eyeglasses, operation for stricture, castration, circumcision, ligation of internal pudic artery, operation for hæmorrhoids, cautery to spine, seton in neck, extension of eye muscles, enucleation of one eye. Finally, falling into Dr. Bosworth's hands, that surgeon found almost complete nasal occlusion from septal deviation and an enlarged left middle turbinated body with myxomatous degeneration, and evidences of ethmoiditis. Appropriate treatment resulted in speedy cure. Verily, truth is stranger than fiction. We should like to know what opinion is held of the "noble" profession by that patient—or what is left of him.

Nitro-glycerine in Sciatica.—Mikhalkine reports three cases of obstinate sciatica which were greatly benefited by nitro-glycerine given in the form of the official solution in one-drop doses, three times a day, *Univ. Med. Mag.* In one case, a patient, aged forty-four, in whom salicylates, acetanilide, phenacetine, quinine, antipyrine, bromides, chloral, massage, sedative ointments, and blisters failed to give relief, the following combination was entirely successful: Nitro-glycerine (one per cent. solution), three to thirty minims; tincture of capsicum, ninety minims; peppermint water, three drachms. Three drops three times a day, for three days, and then ten drops three times a day. In another patient, a nervous woman, aged forty-five, with atheromatous arteries and sciatica, associated with atrophy of the muscles and hyperæsthesia, the same combination in conjunction with bromides, also afforded speedy relief. The third case was a man, aged forty, who suffered with fever and severe pain in the right leg. A blister over the trochanter, with sodium salicylate and valerian, lowered the temperature, but failed to relieve the pain. After the lapse of four days the nitro-gycerine treatment was substituted, and this promptly lessened the pain and effected a cure within six weeks, the trouble not having returned after six months.

New Treatment for Tapeworm.—Dr. I. H. Newton reports in the *Lancet, N. Y. Med. Times*, a very successful treatment for tapeworm, which was revealed to him in prescribing for another trouble. A patient for whom he had prescribed a mixture composed of hydriodate of potass., gr. 36; iodine, gr. 12; water one ounce, ten drops three times a day in water, unexpectedly passed a dead tapeworm eleven yards long, of which there were no previous symptoms. The remedy has proved successful in three other cases, the last confirming in a marked manner the specific action of the combination. The remedy was given to a patient who had suffered for two years with a tapeworm, constantly passing pieces of the parasite, but failing with any treatment to get rid of the entire parasite. A short time after using the new remedy he passed a mass of dead tapeworm, and for a year there has been no return.

Tendon Grafting. — At the meeting of the N. Y. State Medical Association, October 15th, 1895 *(Med. Rec.)*, Dr. Milliken presented a boy 11 years of age, upon whom, twenty months before, he had successfully grafted part of the extensor tendon of the great toe into the tendon of the tibialis anticus muscle, the latter having been paralyzed since the child was 8 months old.

The case which was presented showed the

advantages of only taking part of the tendon of a healthy muscle, which was made to carry on the function of its paralyzed associate, without in any way interfering with its own work.

The brace, which had been worn since 2 years of age, was left off; the patient walked without a limp, the talipes valgus was entirely corrected, and the boy had become quite an expert on roller skates.

Dr. Milliken predicts a great field for tendon grafting in these otherwise helpless cases of infantile paralyses, who heretofore have been doomed to the wearing of braces all their lives.

ACNE ROSACEA.—Dr. Allan Jamieson, of Edinburgh, treats the above troublesome disease as follows:

℞—Sulphur precip., ... ℥ j.
Calaminæ prepar., ... ℥ ij.
Zinci oxidi, ... ℥ j.
Glycerini, ... ℥ j.
Aquæ dest., ... ad. ℥ iv.
M. ft. lotio.

Sig.—The lotion to be shaken, then painted on with a camel's-hair brush at night.

In the morning the face is washed with a little warm water (no soap) and powdered over with the following:

℞—Acidi borici, ... pts. x.
Talci, ... pts. xv.
M. ft. pulv.

Sig.—To be applied every morning.

I have found that a proper diet and looking to the functions of the bowels are very important adjuvants. Locally, the use of Vlemingkx's solution, followed by the application of the following ointment, will be followed by good results:

℞—Hydrarg. oleat., 5 %,
Sulphuris loti., ... āā ℥ ss.
Ung. aquæ rosæ, ... ℥ j.
Sig.—Rub in thin each morning.

SIX HUNDRED ($600) DOLLARS IN PRIZES.—The special attention of our readers is called to the advertisement of the Palisade Manufacturing Co. of Yonkers, N.Y., to be found on another page. The prize contest which this well known firm announces will no doubt attract a great deal of attention, and results in the submission of many articles of merit on "The Clinical Value of Antiseptics both Internal and External." The prizes are extremely liberal, and the well known professional and literary eminence of Dr. Frank P. Foster, the talented editor of the "The New York Medical Journal," who has kindly consented to act as judge, is a sufficient guarantee of the impartility to be observed in the awarding of the the prizes. We are assured that there is absolutely "no string" attached to the provisions of this contest, and any physician in good standing in the community is invited to compete on equal terms with every other competitor. Further particulars as to conditions, etc., can be obtained by addressing the above-named firm.

BORAX AS AN AID TO THE DIGESTION OF MILK.—M. Germaine See announces the clinical fact that borax used internally is a valuable aid to the digestion of milk, *Med. and Surg. Rep.* He discards the use of carminatives, charcoal and other intestinal antiseptics, claiming that they injure the mucous membrane of the intestines. He employs laxatives—hydrastis canadensis, castor oil and olive oil—in large doses, or oil enemata. Professor See holds that in many cases of indigestion the stomach is erroneously treated, when the real cause of the disease is the intestines, which are often the seat of membranous enteritis resulting from constipation, and giving rise to glairy, mucilaginous, cylindrical masses of mucus, with pain and swelling over the region of the colon. These symptoms easily distinguished the cases referred to from ordinary constipation, in which there may be easily seen masses of filamentous or vermicelli-like mucus.

PRURITIS OF THE SCROTUM.—Pruritis of the scrotom is a most painful and rebellious affection, and according to Brocq, *Med. Press*, constitutes a regular cutaneous neurosis. The itching is sometimes so intolerable that the patient becomes almost delirious. Prof. Brocq advises the following treatment:

℞—Phenic acid, ... ℥ v.
Glycerine, ... ℥ ijss.
Alcohol, ... ℥ j.
Water. . . . . ℥ x.

Mix one part of this solution with four of hot water, and steep in it a compress folded eight or ten times, and then apply to the scrotum, main-

taining it in place with an india-rubber suspensory bandage.

As a general treatment, he gives antipyrin in small doses (ten grains repeated twice in the afternoon), and valerianate of ammonia at night.

Relations of Tuberculosis of the Cervical Lymphatic Glands to Tuberculosis of the Tonsils.—Kruckmann, *Virchow's Archiv.*, *Jour. Am. Med. Assoc.*, confirms the observations of Hanau-Schlenker. In 30 cases of lung tuberculosis, there was tuberculosis of the tonsils 12 times. An apparently primary tuberculosis of the cervical glands can also develop from the tonsils, even when the clinical examination fails to demonstrate the presence of pulmonary tuberculosis. In one case there was tuberculosis of the tonsils and the mesenteric glands only. This was presumably due to ingestion of bacilli with the food, the bacilli becoming localized in the organs that especially receive and retain foreign elements, while the mucous membranes themselves did not become infected.

Funk & Wagnall's Standard Dictionary.—British fair play seems no longer to be a rule of conduct with certain men in the book trade. That a reprinter of a rival English work should have the audacity to collate eighteen indelicate words, out of a vocabulary of over 300,000 terms in the Standard, to print them with their definitions, and to scatter them in circular form over the length and breadth of the land, seems too monstrous to be believed. Yet we have the authority of Mr. J. K. Funk as to the correctness of the above statement. We need hardly call the attention of our readers to the gross injustice which is being done Messrs. Funk & Wagnall, who have, we believe, put upon the market the best English dictionary yet printed. The idea of its being indelicate or obscene is too absurd to require further notice.

Specialism Run Mad.—A correspondent sends to the *Med. Rec.* the following copy of an alleged advertisement: "Dr. James Q. Smith begs to announce that he makes a specialty of giving advice regarding the medical and surgical diseases associated with the use of the bicycle. He is also prepared to make physical examinations of men, women, and children, and prescribe for them the kind of bicycle, and the amount of bicycle exercise adapted to their constitution. The doctor will also provide, to those who desire it, suitable wheels, and arrange the gearing, seats, and handles so that the machine will accommodate itself to the physiological peculiarities of each patient. Dr. Smith has had a large experience in this specialty, and confines himself to it."

Strontium Carbonate as a Dentifrice.—Métral, *Bull. Gén. de Thérap.*, speaks highly of the use of strontium carbonate as a dentifrice. He has employed the following formulæ:

℞—Strontium carbonate, Flowers of sulphur, āā . ℥ iv.
Essence of rose, ... gtt. vj.—M.
To be triturated and used as a powder.

℞—Strontium carbonate, . . ℥ iss.
Flowers of sulphur, . . . gr. xlv.
Medicinal soap, ... ℥ viss.
Essence of rose, ... gtt. vj.
Mucilage of gum arabic and glycerine sufficient to make a paste.

In The Treatment of Herpes Zoster.—Robin, *Bull gén. de Thérap.*, recommends the application on cotton of a powder constituted as follows:

℞—Starch, ... ℥ iv.
Zinc, ... ℥ j–℈iv.
Camphor, ... gr. iv–gr. xii.
Opium, ... gr. iv—M.

For the accompanying neuralgic pain a pill of the following composition may be administered three times a day:

℞—Extract of stramonium, Extract of hyoscyamus, of each gr. $\frac{1}{6}$.
Extract of belladonna, . . . gr. $\frac{1}{3}$—M.

Alumnol as a Hæmostatic.—A 10 per cent. aqueous solution of alumnol when a hæmostatic is necessary after operation in, or traumatism, to the nose and throat. It does not form an objectionable magma with the blood as do many astringents, nor has it shown, at any time during a year or more of its use, any untoward action upon the mucous membrane of the nose or adjacent passage, but the results from its use are most excellent.

DETERMINATION OF SEX.—Seligson, *Bost. Med. and Surg. Jour.*, in a preliminary article on the subject of the cause and determination of sex, advances a few interesting facts in support of the theory that ova from the right ovary develop into males, those from the left into females. Rabbits from which the right ovary has been removed bore only female young, while those from whom the left had been extirpated brought forth only male. Again, in all the cases of tubal pregnancy of which the author could find notes, where the sex of the fœtus was given, nineteen in all, those of the right side were always males, those of the left females. These points would seem to merit further investigation.

TO REMOVE TATTOO MARKS.—To salicylic acid add glycerine q. s. to make a mass about the consistency of baker's dough, *Med. Brief.* Apply a thick layer of the dough to the tattoo marks and confine it there with a compress and strips of adhesive plaster for one week and then remove. Remove the layer of epidermis over the marks and apply a second batch of the dough and confine as before. It may be necessary to repeat again, but if the first and second applications are heavy and well confined you will have no more tattoo marks.

SOLVENT FOR SORDES.—Dr. MacGregor, *Brit. Med. Jour.*, recommends:

℞—Boric acid, ... gr. xxx.
Potassium chlorate, ... gr. xx.
Lemon juice, ... ʒ v.
Glycerine, ... ʒ iij.

When the teeth are well rubbed with this, the sordes easily and quickly becomes detached; little harm will follow from the acid present. The boric acid attacks the masses of bacilli and bacteria, and the chlorate of potassium cools and soothes the membrane; the glycerine and lemon moisten the parts and aid the salivary secretion.

NEURALGIA.—Hunsberger claims aconite or aconitine to be the remedy *par excellence* in this affection, *Kansas Med. Jour.* Its actions depends upon the physiological fact that it diminishes reflex activity by paralysis of both motor and sensory nerves, commencing at their peripheral endings, and that this action is most marked in the sensory nerve endings. There is not another drug with which this action can be produced on the sensory nerve endings without pushing it to the danger point.

DIET IS VITAL IN DIABETES.—Bread from ordinary white flour, aggravates the disease in spite of medicine, and bran bread and other substitutes are so unpalatable and expensive, patients cannot use them with satisfaction. Physicians find this a serious drawback in their practice. For this reason we are glad to remind the medical profession of the "Special Diabetic Flour," made by Farwell & Rhines, of Watertown, N. Y., which seems to have general and hearty endorsement wherever tried. The makers believe in their goods, hence their liberal offer of free baking samples. Write them for particulars regarding this and other valuable sanitary flours for dyspepsia, constipation and obesity, and the new diuretic "Barley Crystals."

CHLORINE WATER IN THE GASTRITIS OF DRINKERS.—Zedeker treated a case as follows, *Courier Méd.*:—

℞—Chlorine water, ... 8 gram.
Decoct. marshmallows, . . 165 gram.
Sugar, ... 8 gram.

Sig.—Tablespoonful every two or three hours.

The gastritis was cured, appetite returned, depression was removed, and the desire for drink banished.

CONSTIPATION IN INFANTS.—

℞—Sodii bicarb., ... ʒ j.
Tr. nucis. vomicæ, ... ♏ vj.
Tr. card. comp.,
Syr. simp., ... āā f ʒ ij.
Aq. chloroform., ... f ʒ ss.
Aquæ, ... f ʒ ij.

M. Sig.—Teaspoonful every six hours.

GOOD JOURNALS REPAY.—The country physician, says *The Journal*, can use his money to much better advantage than in buying the larger treatises, by subscribing for as many good journals as he can read, and every three to five years such works on special subjects as he needs. There are few medical books that are not "old and gray" in five years, in these days of medical progress.

PROF. HAJAK, of Vienna, has declared that

smokers are less liable to diphtheria and other throat diseases than non-smokers in the ratio of 1 to 28. The learned Dr. Schiff also gives us to understand that smoking is always positively forbidden in bacteriological laboratories, because it is known to hinder the development of the bacteria.

For Chronic Eczema.—*Practitioner:*

℞—Liquor carbonis detergent., ♏ xx.
Hydrarg. ammoniat., . . gr. xx.
Ung. zinci oxidi, . . . f ʒ ss.
Vaselin., ... f ʒ ss.
Sig.—Apply topically.

Behring's Law says that the blood and blood-serum of an individual which has been artificially rendered immune against a certain infectious disease, may be transferred into another individual with the effect to render the latter also immune, no matter how susceptible this animal is to the disease in question.

Much relief is said to be often obtained by a gargle containing chloral, according to the following formula:

℞—Chloralis, ... gr. xv.
Glycerin, } . . . . . āā ʒ js.
Aqua, }
M. Sig.—For use as a gargle.

Physicians of the United States number, acoording to Polk's directory, 106,633. *Chicago Med. Rec.* Of this number, 72,028, or 67.55 per cent. are regulars; 9,648, or 9.05 per cent. homœopaths, 10,292, or 9.65 per cent. eclectics, 1,553, or 1.45 per cent. physiomedicals, and 11,524, or 10.80 per cent. unclassified.

Cannabis Indica for Itching.—Mackenzie, *Am. Pract.*, declares Indian Hemp will give relief in the itching of skin diseases not amenable to local treatment. The full effect of the drug must be produced promptly. He employs the tincture in doses of five or ten drops on sugar, repeated as often as is necessary.

To Dissolve Tartar of the Teeth.— Dr. Pierce highly recommends, *La Méd. Mod.*, trichloracetic acid; a wooden spatula being moistened with the agent and rubbed against the encrusted teeth until the tartar is thoroughly dissolved. The operation must be carefully performed, as the acid is an energetic escharotic.

For Acute Coryza.—*Pract.:*

℞—Chloralis, ... gr. x.
Olei ricini, ... f ʒ iv.—.M.
Sig.—Apply to the cleansed nasal mucous membrane.

Frederick Stearns & Co., of Detroit, have issued a calendar for 1896, which is not only beautiful in itself but is most interesting as showing what may be done in color photography. The firm will send one to any person desiring it who encloses 25 cents to cover actual cost, postage, etc.

Purulent Ophthalmia.—*Scott:*

℞—Hydrastis sulphatis,
Acidi borici,
Sodii biboratis, ... āā gr. v.
Tinct. opii deodor., ... ʒ ss.
Aquæ dest., ... ʒ j.
To be used as a collyrium from the beginning.

Ammonol in Obstructive Dysmenorrhœa.—Dr. Sullivan, of New York, has relieved a patient of the pains of the above disease by a dose of 15 grams of ammonol, followed in one hour by one of 10 grams.

Dr. Cantrell, *Med. World*, freezes the part with rhigolene or ethyl chloride, then freely scarifies with a five-bladed knife. He believes this the best treatment, and asserts that it gives prompt relief.

A Mixture of chloroform, ten parts, ether, fifteen parts, and menthol, one part, used as a spray, is recommended as an excellent and prompt means for obtaining local anæsthesia, lasting for about five minutes.

Troubles in the Community.—

The coal dealer dies of colitis;
The twine-maker had the chord-ee;
The farmer's attack of oat-itis
And rye-neck was painful to see;
The wheelman went blind with cyclitis,
The bridge-builder suffered from piles,
The servant girl had Sal-pingitis,
And the cook was all covered with b'iles.
—*Southern Med. Rec.*

Books and Pamphlets

A Treatise on Nervous and Mental Diseases. By Landon Carter Gray, M.D., Professor of Diseases of the Mind and Nervous System in the New York Polyclinic. New (2nd) edition. In one very handsome octavo volume of 728 pages, with 172 engravings and 3 colored plates. Cloth, $4.75; leather, $5.75. Philadelphia: Lea Brothers & Co. Toronto: Carveth & Co. 1895.

The whole book has been revised and five new chapters added, on Dementia, Paranoides, Confusional Insanity, Delirium, and Massage. The work is as practical as any work can be, which deals with nervous and mental diseases, two branches of medicine which are to a great extent unknown ground to the bulk of the medical profession.

The author embraces in "treatment" not only the therapeutic applications of drugs, but also those hygienic and dietetic measures which are most suited to individual cases, and which are often the physician's main reliance. Part III, on mental diseases, is the most useful work for the student and general practitioner that we have seen. The new edition should be even more popular than was the first.

The "Medical Record" Visiting List for 1896. New revised edition. New York: William Wood & Co.

This edition has been revised to increase the amount of matter calculated to be useful in emergencies and eliminate such as might better be referred to the physician's library. The most important change is in the list of remedies and their maximum doses. There is a table showing the probable duration of pregnancy, solution for subcutaneous injection, emergencies, surgical antisepsis, etc., etc.

Green's Pathology and Morbid Anatomy. By T. Henry Green, M.D., Lecturer on Pathology and Morbid Anatomy at Charing-Cross Hospital Medical School, London. Seventh American, from the eighth and revised English edition. Octavo volume of 595 pp., with 224 engravings, and a colored plate. Cloth, $2.75. Philadelphia: Lea Brothers & Co. Toronto: Carveth & Co. 1895.

We are glad to see a new edition of this old favorite. The rapid accumulation of facts in pathology and consequent changes in opinion have rendered it necessary that several new sections should be added, and several old ones re-written or withdrawn. Many changes have been made. Sixty new illustrations and a colored frontispiece have been added. The Editor, Dr. H. Montague Murray, F.R.C.P., has brought the work up to date, and Green will be still found in the hands of most students of medicine, as it has been for so many years.

Directions for Work in the Histological Laboratory. By G. Carl Huber, M. D., Assistant Professor of Histology and Embryology, University of Michigan. One vol. of 191 pages. Second edition. 1895. Price $1.50. Ann Arbor: George Wahr.

This work is intended for the senior student, or one who has attended a course of lectures on histology, and knows something of the subject.

The author is fully alive to the requirements of the medical student of to-day, and gives all necessary details systematically and concisely.

The absence of cuts and diagrams detract somewhat from the completeness of the book, though in all other respects it admirably fulfils the object for which it was written, viz., the systematic study of practical histology.

It is a book, anyone doing histological work, could use with profit.

The International Encyclopædia of Surgery. A systematic treatise on the theory and practice of surgery, by authors of various nations. Edited by John Ashurst, Jun., M.D., LL.D. In seven volumes. Vol. VII. (Supplementary volume.) New York: William Wood & Co.

Owing to the rapid advances being constantly made in the art and science of surgery, a large Encyclopædia is apt to be out of date, in some matters, almost before the leaves are cut. This difficulty has been obviated in the present instance by issuing this supplementary volume, in which every department of the subject has been brought fully up to date. The list of authors, some 48 in all, includes the names of many world-renowned surgeons, who treat their subjects in such a manner as to cover the ground thoroughly, while at the same time conciseness was evidently an object in view, as to the whole volume (1082 pages), is not unwieldy. While this volume could only be of value as a supplement, it may be said to be absolutely indispensable to the completeness of the Encyclopædia.

THE CANADA LANCET.

VOL. XXVIII. | TORONTO, FEBRUARY, 1886. | No. 6.

SIX YEARS' EXPERIENCE IN ABDOMINAL AND PELVIC SURGERY.*

BY A. LAPTHORN SMITH, B.A., M.D., M.R.C.S. ENGLAND.

Fellow American Gynæcological Society; Professor Clinical Gynæcology, Bishop's University; Gynæcologist to the Western Hospital; Gynæcologist Montreal Dispensary; Surgeon-in-Chief Samaritan Hosiptal for Women, Montreal.

The accompanying list which is now presented to the Society contains all my abdominal sections, without any reservation whatever, with the name and age and address of the patient with the disease for which the operation was performed, the nature of the operation and the immediate and remote results, as well as the date and place of operation.

They have all been performed during the last six years, previous to which time I sent all cases requiring operation to more experienced surgeons. It was only after I had been in general practice for sixteen years that I began to feel justified in undertaking so serious a responsibility myself. Up to the 20th November, 1895, the time of writing this, I have performed 143 abdominal sections, with 11 deaths, at the following places:

Private Hospital;	67,	with 5 deaths,	or 7 %.
Western "	42,	" 4 "	" 9 %.
Samaritan "	24,	" 1 "	" 4 %.
Strong's "	2,	" 0 "	
Private houses;	8,	" 1 "	" 12 %.

Total, 143 sections, with 11 deaths, or 7½ %.

They were performed in the following years:

In 1890,	4	operations,	with 0	deaths.
In 1891,	8	"	" 1 "	or 12 %.
In 1892,	12	"	" 2 "	" 17 %.
In 1893,	23	"	" 3 "	" 13 %.
In 1894,	39	"	" 3 "	" 8 %.
In 1895,	57	"	" 2 "	" 3½ %.

These 143 cases were operated on for the following reasons and with the following mortality:

Removal of large tumors of the kidney by abdominal section, 2; no death.

Extra-uterine pregnancy, 3; no death.

Large ovarian tumors, 8; 1 death.

Abdominal hysterectomy, 11; 3 deaths.

Ventral hernia, 7; no death.

Obstruction of the bowels of nine days' standing, 2; 2 deaths.

General peritonitis, following miscarriage, 1; 1 death.

General tubercular peritonitis, 2; no death.

Cancer of both ovaries, 1; no death.

Puerperal septicæmia, 1; no death.

Ruptured pus-tube, 1; no death.

Trenholme's operation, or removal of appendages for fibroid tumor, 4; no death.

Pus-tubes, 42; 3 deaths.

Cystic ovaries and chronically inflamed tubes, 9; 1 death.

Hydrosalpinx, 6; no death.

Ventrofixation, including in some cases curetting and repair of lacerated cervix and perineum and removal of diseased ovaries and tubes, 43; no deaths.

Making a total of 143 cases, with 11 deaths.

Having stated when and where these operations were performed and how many recovered and how many died, I would like to point out that the death rate in 1892 and 1893, of 17 and 13 respectively, was larger than it should have been, owing to my having operated on women

* Read before the Medico-Chirurgical Society, Montreal, 29th November, 1895.

who were moribund with obstruction of the bowels of nearly nine days' duration, one of whom died on the table and the other the same night.

In the first case, I felt at the time that her chances were *nil*, but after consultation with my colleagues, it was deemed right to give her the benefit of the doubt. As I only opened the abdomen 12 times in that year, that one case made my mortality 17, instead of 8½%. In the second case, which occurred the following year, the patient was a very old woman in the country, who had a strangulated femoral hernia for nine days. The bowel was gangrenous and broke at the slightest touch, and I opened the abdomen in order to remove enough of it to sew healthy intestine to the incision and so make an artificial anus. But her death had nothing to do with the operation. That case raised my mortality that year from 9 to 13%.

Where the operations were performed.—I have come to the conclusion that this makes very little difference, as far as the result is concerned, although the trouble and anxiety for the operator are very much greater in a private house. Of the 8 cases operated on in private houses, all of whom recovered with the exception of the strangulated femoral hernia case, above referred to, there were one abdominal hysterectomy, two very bad tubo-ovarian abscesses, one large hydrosalpinx, one ventrofixation, accompanied with curetting and amputation of the cervix and removal of large cirrhotic ovaries, one removal of very small sclerosed ovaries. Of the two performed at Strong's Hospital, both of whom recovered, one was a hysterectomy for a large fibroid, and the other the removal of a large cystic kidney by the abdomen. Among the 23 who recovered at the Samaritan, were one large fibroid of uterus, one large cyst of the ovary, three Trenholme operations, *i.e.*, removal of the appendages for fibroid tumors, two desperate cases of ventral hernia, and five cases in which, there being menorrhagia and a lacerated cervix and perineum and the uterus being retroverted and fixed by exudation, which at the same time cemented the tubes and ovaries into Douglas' *cul-de-sac*, it was thought best to remedy all these conditions at once, and the uterus was therefore dilated, curetted, the cervix and perineum repaired, the ovaries and tubes removed, and the uterus stitched to the abdominal wall. The highest death rate was at the Western, but that can easily be accounted for; first, because my earliest operations were performed there, and, second, because the worst cases happened to come there. The lowest death rate was at Strong's Hospital, and the next lowest at the Samaritan.

I have honestly tried my best to reduce my death rate, but not by selecting cases. If I had done so, my list would not have had to carry the two cases of obstruction of the bowel. But if this report is to be of any use, it must be absolutely accurate and reliable, and I have therefore put down every case of death. I have here a list containing the name and address of every woman whose abdomen I have opened, as I think it the duty of every one to throw his records open for inspection and verification.

In view of the constant efforts to reduce the death rate which the abdominal and pelvic surgeons are making, an examination of the causes of death has always been of the greatest interest to me. I would like therefore to analyze these 11 deaths, and see how many of them could have been prevented. My first death was a case of very large multilocular ovarian cyst, filled with colloid material and completely filling the abdomen, and adherent to nearly all the viscera. The pedicle was ten inches wide and had to be tied and cut in many segments. There was much oozing from the parietal and visceral peritoneum, which was however arrested by hot sponges. A drainage tube was inserted and a few hours afterwards, when the pulse had gained some strength, red blood began to come from the tube. It was hoped that it would soon stop, but as it continued next day, the incision was re-opened, when a tiny jet of blood was seen to be coming from a tear in the broad ligament between two ligatures. It was easily tied and the abdomen was washed out, but she was too weak to rally and died next day. This accident would probably have not occurred, had we then possessed the Trendelenburg posture, by the aid of which we can inspect every part of the broad ligament and place sutures on oozing points. The operation would hardly have been a serious one if it had been performed early enough.

Abdominal hysterectomy, with three deaths.—One of these was a case so difficult, that I should have abandoned total extirpation of the uterus and been content with removal of the appendages, which in the four cases above mentioned proved so satisfactory. The uterus was squeezed in between two solid masses of fibrous tissue, which completely filled the pelvis, the right ureter running over the front of it. The two ovarian arteries were tied, but it was impossible to tie the uterine ones until the tumor was first extracted—with the greatest difficulty—so they were clamped and afterwards tied. The peritoneum was sewed over the stumps. The patient reacted nicely and was apparently making a good recovery during the first four days, with a pulse and temperature under 100. At my morning visit she was asking what she could have for dinner. An hour later her condition suddenly changed, her pulse jumping up to 140, with a normal temperature. I was tempted to open her and look for hæmorrhage. But her pulse came down several times under digitalis and strychnine.

She died on the sixth day, and on opening the incision the peritoneum was found clean and nicely healed in both places, and no explanation could be given. There is little doubt, however, that she would have been alive to-day, if I had simply removed the appendages, when the tumor would probably have given no further trouble. But I thought at that time that it was dishonorable to back down on an operation. Since then I have seen the best operators in the United States perform a safer operation than they had started to do, and even sew the patient up without doing anything, and I feel convinced that they are right.

One of the other deaths was due to sepsis, the only explanation for which was that the patient was disobedient and jumped out of bed to use the chamber when the nurse was out of the room, and that while she had a serre noeud and pins on the stump of a large fibroid tumor.

The third death was due to the operation having to be abandoned, owing to the intimate connection of the large fibrocystic tumor with the bladder, rectum and large vessels of the pelvis, in which it was deeply imbedded.

It is interesting to note that, in one of the cases of obstruction of the bowels, the cause of the trouble was the adhesion of a loop of small intestine to the stump of an ovarian tumor which had been removed four years before, thus causing a kinking of the bowel. This is an argument in favor of covering over the stump in all such cases with peritoneum, which since then I have generally done.

The seventh death was of interest for several reasons. She was a lady who had had four miscarriages, and, being anxious to have children, I placed her on viburnum prunifolium, with the happiest results, going on to full time. She then had several children at full time, never having the least trouble either with her miscarriages or labors. Then she sent for me to attend her for a miscarriage, and as I found the temperature high, I advised her to come to my private hospital for curetting. This was done, but with no improvement; the temperature continued to rise and the pulse to get faster, and a tender spot made its appearance in the McBurney region.

Suspecting appendicitis, the abdomen was opened that night at midnight. The uterus, ovaries and tubes and appendix were all bathed in pus. Not knowing which was the original cause of the trouble, the vermiform appendix, as well as the ovaries and tubes, was removed. There was a general suppurative lymphangitis, as pus could be squeezed out of the cut edges of the broad ligament, and also there was pus and flaky lymph all over the peritoneum, which was carefully wiped out. After this she had no more pain, but she died the next day.

We now come to the three deaths in 42 cases of pus tubes. These have generally been considered very dangerous cases, but I have not found them so bad as they have been painted. In many of the cases which recovered, the tube has burst, and the abdomen has been flooded with bad smelling pus which was carefully washed away. In one case the pus tube had burst into the broad ligament, setting up cellulitis, and then had been opened into the vagina; a fistula from the tube to the vagina ensuing, which continued to discharge foul smelling pus for six months, when the patient demanded an operation. The latter proved a formidable undertaking, necessitating the tying off of nearly the whole of the broad ligament on one side. Although great difficulty

was experienced in saving the patient's life, she ultimately made an excellent recovery, and is now in perfect health. In many others there were dense adhesions between the tubes and the intestines, causing slight tears in the latter, which were repaired, and the patients recovered.

One of the three deaths among the pus tube cases was due to drainage tube infection. For the first few years the drainage tube was used in nearly every case, but since we have the Trendelenburg posture, the drainage tube is rarely required, because we are able to see every part of the broad ligaments and tie every oozing part.

In this case the tubes and ovaries were densely adherent, and when they had been removed there was still a good deal of oozing, the source of which could not be found, so that a drainage tube had to be employed. But it led to fatal peritonitis. In the second case of death after pus-tube operation, the patient had had many attacks of pelvic peritonitis, so that the tube, which was a large one, was firmly imbedded in exudation. In digging it out it was torn in many places, so that it was almost impossible to avoid leaving some small portions of it. But the abdomen was carefully flushed out several times, and a drainage tube inserted. She had a fast pulse from the first day, and died of acute sepsis on the third day.

The third death occurred in a stout woman who had had many attacks of pelvic peritonitis, until she had become a chronic invalid. Her invalidism preventing her from taking exercise, she had grown very stout, and this rendered the operation more difficult. Layer after layer of dense adhesions were broken through, and the ovary and tubes were torn to shreds in the process of removal. Gauze packing was used to arrest the oozing, but this was removed in two days. The patient developed sepsis, and died on the sixth day. At the *post mortem* the peritoneum was found clean and free from fluid. This was the only death that has occurred at the Samaritan. All three of these deaths could have been prevented by a much earlier operation. There is still one other death to be accounted for, and that occurred in a case of simple cystic ovary, the cyst being about the size of an orange. The operation was quite easy, and there was every promise of a good recovery. On the fourth day saline mixture was ordered, and as it suddenly began to operate while the nurse was out of the ward, the patient attempted to get up to go to the chamber, but fell back exhausted and fainted. I was immediately sent for, but found her with a rapid pulse but low temperature; she never rallied. No *post mortem* was allowed, so that I am unable to state whether she died of hæmorrhage or not. Eight of the eleven deaths may fairly be put down to the operation, which would give a mortality of five and three-quarters per cent. in a hundred and forty-three cases.

Now as to the ultimate results of the 132 cases which recovered from the operation, the two cases of tubercular peritonitis and the case of cancer of the uterus, subsequently died from the progress of the disease, the latter case dying about four months later from cancer of the liver, while one of the tubercular cases died three months afterwards, and the other three or four weeks later from hæmorrhage of the bowels. Of the remaining 129, all gave excellent results, with the following exceptions: One of the pus tube cases who had had several severe attacks of pelvic peritonitis, in the midst of one of which the operation was performed, has never been well since, having a constant discharge of acrid pus from the uterus as well as suffering much pain in that organ, notwithstanding that she had been curetted and the lacerated cervix repaired previous to the removal of the two ovarian abscesses. In her case the uterus must be curetted again and drained, or else it will have to be extirpated. Her husband contracted gonorrhœa quite often, and may have reinfected her on her return home.

In three of the cases of retroversion and fixation, the ovaries and tubes being torn out of Douglas cul de sac, where they were adherent, were not removed, at the patients' urgent request, although I urged them before the operation to leave the matter to my discretion. These three women tell me now that they regret that they did not leave me to do as I thought best, as they still suffer from the ovaries, although the pain in the back and other symptoms of retroversion have been cured.

In several other cases I have opened cysts of the ovaries, and removed portions of the ovaries instead of removing the whole of them; but this procedure has not always been satisfactory.

Having said so much about the failures, may I

not say a few words about the successes. The most gratifying results have been from the operation of ventrofixation, especially when it has been accompanied with dilatation, curetting, repair of lacerated cervix and perineum, and removal of the diseased appendages. I regret that the limited time at my disposal will not permit me to mention these 43 cases in detail, but I may at least take time to say that the majority of these women had been incapacitated for many years from performing domestic, social or marital duties. On making a vaginal examination, the finger came at once upon the tender and swollen ovaries imprisoned in Douglas cul de sac by dense adhesions, due to one or more attacks of pelvic peritonitis, and the slightest pressure on them caused unbearable pain. Coitus, with such a condition of things, was out of the question, while walking was almost impossible, because the heavy uterus was retroverted and lying upon the sensitive ovaries, which had to receive the whole weight of the intro-abdominal pressure at every step. The removal of the diseased ovaries and the suspension of the uterus to the abdominal wall immediately put an end to their sufferings. Certainly they have been among the most grateful of my patients. In one case only, as far as I am aware (and I have re-examined most of them), has the uterus fallen again, and that was due to my having removed, at the end of a month, the stitches which held the uterus up. I now invariably leave in two or three carefully sterilized iodoform silk ligatures which have been dipped in saturated solution of iodoform in ether, and which appear to give no trouble.

The cases of fibroid treated by Trenholme's operation have also made splendid recoveries. In some of the cases the hæmorrhages previous to operation had been terrible, but in none of them was there more than one hæmorrhage after the operation. One of the worst of them was seen a year later, when the tumor had shrunk to one-third its former size, and the patient expressed herself in perfect health. It was with great pleasure that I read in a monograph by Cushing, on the "Evolution of Abdominal Hysterectomy in America," which reached me to-day, the following words: "A more important advance was the application of Trenholme, of Montreal, in 1876, of Battey's operation of oöphorectomy to the treatment of uterine fibroids. Reasoning correctly that if this operation would stop menstruation, and thus cure dysmenorrhœa, it would also cure menorrhagia, and probably bring about the atrophy of the tumor, which so often occurs after the natural menopause. Trenholme published his first case in July, 1876."

The result of the removal of the tumors of the kidney by the abdomen has also been very successful; one of them is now over seventy years old and in excellent health. The other a young woman with a cystic kidney which almost filled the abdomen, walked out of my private hospital in thirty days; and has remained in perfect health since, now nearly two years. Her kidney contained besides semi purulent urine, several calculi. The rapidity of her pulse after the operation gave me some anxiety, it remaining about 140 for nearly a week, with the temperature normal. I have read somewhere that this has been noticed in other cases of removal of the kidney. I am much in favor of the abdominal route for extirpating the kidney, for several reasons, not the least of which is that we are thus enabled to ascertain whether the patient has another kidney before we remove even a bad one. Another reason is that we have plenty of room to do good clean work, and see what we are doing. In the last mentioned case a drainage tube was used for a few hours only, but as nothing came from it, it was promptly removed.

The sections for tubal pregnancy were also very satisfactory. Two of them were diagnosed before operation, but not so the other. In all of them rupture had occurred, and free clots in various stages of organization were found in the pelvis. One of these patients insisted upon walking out of my private hospital in twelve days, owing to sickness of her children, but kept her stitches in for thirty days. She appeared none the worse for it. The other insisted upon walking out of the Western in fourteen days, and also made a good recovery. The third case presented a history of diseased appendages for many years, and when I examined her at her home, I found them very large and painful, and advised their removal. There was much free blood in the abdomen, but I did not learn that she had fainted before taking to bed, until I made rigorous inquiries about it after the operation. I was in doubt about remov-

ing both tubes and ovaries in these cases, but considering that quite a number of women have had to have subsequent removal of the other tube for the same thing, and as both tubes appeared diseased, I felt it my duty to remove both tubes in these cases.

There were several other cases which looked very like tubal pregnancy, but as no chorionic villi could be found, they have been classed with other cases of diseased ovaries and tubes.

I have already stated that two of the cases of ventral hernia were very difficult. One was a case of seventeen years' standing, and the intestine was so adherent to the abdominal wall that it was found to be impossible to dissect it off without seriously injuring the bowel. The latter was therefore freed by cutting off a thin slice of the abdominal wall, and leaving it on the intestine, and the omentum was drawn down over the bowel. In this and in five other cases the abdominal parietes was split up into its constituent layers, and opposite sides united with layers of buried sutures; in the seventh case, in which the opening was small, it was closed by a buried purse-string suture which seemed to do well. The other difficult case did not follow abdominal section, but was congenital. She had also hip joint disease, and a sinus leading from the hip joint to the navel, discharging pus. When my hand was in the abdomen, I could trace this sinus like a rubber tube half an inch thick right down to the pelvic wall, in front of the peritoneum. She will shortly be handed over to a general surgeon for excision of the hip.

Before closing this paper, I wish to pay my tribute of gratitude to Bardenheuer, of Cologne, who first employed the principle in 1881, and to Trendelenburg, who afterwards brought it into general use of performing pelvic operations with the patient inverted, so that the intestines fall away from the pelvis, and allow us to see what we are doing. Some of my patients who died would now be living if I had known about it during my first years of operating, and without it I feel equally sure that some of those who are alive and well, would have now been dead. While we were operating in the dark amidst coils of intestine, our work was inevitably imperfect, and the drainage tube was necessary to make up for our deficiency, but with the advent of the Trendelenburg posture, we can do perfect work, covering over denuded surfaces with peritonem, and tying oozing vessels until there is nothing left to drain.

As far as the effect upon the sexual feelings of the women was concerned, these patients might be divided into three almost equal categories: first, those who after the operation gradually lost all sexual feeling which they had formerly possessed; second, those who never experienced it either before or after the operation; and third, those who had never known what sexual pleasure was before the operation, but gradually experienced it more and more after the diseased ovaries had been removed. About half of the latter have now a strong sexual appetite, several years after removal of both ovaries. I am strongly in favor of leaving in the silk worm gut sutures which close the abdomen for thirty days; since I have been doing this, now some three years, ventral hernia following operation has almost become a thing of the past. I attribute much of my increasing success and diminishing death rate first to the Trendelenburg posture as already explained; second, to the A. C. E. mixture and quick operating, requiring so much less anæsthetic; and third, to my assistants and nurses being better trained and more thorough believers, as I am myself, in *absolute asepsis* from beginning to end.

250 Bishop Street, Montreal.

EXPERT TESTIMONY.*

BY HENRY LEFFMAN, A.M., M.D., PHILADELPHIA.

It is expected, I presume, that this topic shall be discussed critically, and in the severer sense of that word. The history of expert testimony would no doubt be an interesting story, certainly its employment must have been coeval with the establishment of regular jurisprudence. In the Old Testament we find several allusions to expert decision on highly important cases. The diagnosis of leprosy is committed to the charge of the priests under the operation of a general sanitary law, and reference is made also to the determination of virginity.

It is the almost unanimous opinion of intelligent people that expert testimony as at present exhibited in our courts of justice offers much for unfavorable criticism. Not only do the newspapers frequently inveigh against it in general, and in given cases against the experts themselves, but judges often express severe condemnation in their rulings and opinions. Indeed in many cases professional men are seriously discredited, by the very fact that they are called to the witness stand in a professional capacity. Sometimes the court picks out of the conflict between expert opinions a judgment in favor of one side. Thus, in a suit brought in a Philadelphia court by an ignorant laborer who had been first employed about a factory as a carter, and subsequently hired to work in a room in which strong acids were used and through his ignorance was poisoned, expert testimony was produced on both sides. One set of experts testified that the gases were dangerous and that the employer — who was a trained chemist — should have known the fact; while another expert testified that the gases could not have caused the illness. The court of last resort in affirming a verdict for large damages, said that if experts differed so much as to the danger of a certain occupation, an ignorant workman could not be expected to know and should have been carefully warned.

When this question of conflict between experts is discussed, it is usual to think only of medical experts, and in this meeting it will not be expected that any other class should be considered. There is, however, a much larger field, which, so far as I can judge from a limited experience, is more corrupt than that of medical testimony. Indeed, a noted English lawyer says in his autobiography, that he had found experts in engineering questions more difficult to deal with than any other class. "The inside of a bar of iron," he says, "is a *terra incognita* more abstruse than any organ of the human body." In the graver issues of jurisprudence in which only physicians are likely to be called, cases involving the forfeiture of life or restriction of liberty, the procedures take place in open courts, and the very publicity is a protection against extravagance in statement or misrepresentation; but in the private hearings that are given in equity, especially cases involving the nature of patents or the value of real estate, expert testimony runs riot.

To illustrate the variety of opinions expressed by lawyers concerning expert testimony, I quote the following paragraph from a recent work, *The Law and Medical Men*, by a member of the Canadian bar:

"Some judges and writers have very little respect for the evidence and opinions of experts." An Iowa judge says: 'Observation and experience teach that the evidence of experts is of the very lowest order, and of the most unsatisfactory kind.' One from Maine speaks of 'The vain babblings and oppositions of science so-called, which swell the record of the testimony of experts when the hopes of a party depend rather upon mystification than enlightenment.' An Illinois judge quotes a distinguished occupant of the bench as saying: 'If there is any kind

* Read before the American Academy of Medicine at Baltimore.

of testimony not only of no value, but even worse than that, it is in his judgment that of medical experts.' Lord Campbell said: 'Hardly any weight is to be given to the evidence of what are called scientific witnesses; they come with a bias on their minds to support the cause in which they are embarked.' Taylor says: 'Perhaps the testimony which least deserves credit with a jury is that of skilled witnesses. . . . . Being zealous partizans, their belief becomes synonymous with faith as defined by the apostle, and it too often is but the substance of things hoped for, the evidence of things not seen.' On the other hand, Best says: 'It would not be easy to overrate the value of the evidence given in many difficult and delicate enquiries, not only by medical men and physiologists, but by learned and experienced persons in various branches of science, art and trade.' And many judges have spoken of the essential aid to courts and juries rendered by the opinion of the experienced, skillful and scientific witness who has a competent knowledge of the facts involved."

Since we cannot deny that foundation for grave criticism exists in our present methods of expert service, it is proper to examine into the cause and possible cure.

The principal cause is, of course, money. While occasionally, professional or institutional rivalry may lead to antagonism, the temptation of high fees is a sure influence to secure a prostitution of talent and abilities. We cannot expect such temptation to be avoided until human nature undergoes much change and the consciences of men are more generally developed. We must, therefore, look to methods of reform in manner of securing and employing experts to ensure that the influence of the fee may be less potent.

The literature of this subject, as it appears in American journals and text books, inclines very strongly to a system of State experts analogous to that in vogue in some of the nations of continental Europe. Many of those who advocate such a system have but little knowledge and less experience of the details of this method, and a careful study of it in operation, might show serious defects, but it will be sufficient to consider the questions of the applicability of these methods to American practice.

In the first place it must be noted that the system of jurisprudence in vogue on the continent of Europe is materially different from that of England and the United States. The continental procedure is essentially that of the Romans, and has far less of that consideration for the right of the accused, which is so humane a feature of English law.

Indeed, it has been tersely said that under the continental system a man is presumed to be guilty until he demonstrates his innocence. In actual criminal practice the defence depends largely upon the will of the court for its privileges of cross-examination, and the judge often questions the accused at great length. Apart, however, from the great difference of judicial procedure, we must bear in mind the difference in systems of government. That political corruption, both as to dishonesty and favoritism, exists in the best governments of Europe cannot be doubted, but it is certain that they are free from the extraordinary development of party politics as seen in the country. The civil service of England, France, and Germany is by no means perfect; it is not by long odds made up wholly of honest or able men, but there is at least not this continual feverish contest for spoils, and the selection of experts under government auspices can be kept in part out of the vortex of political life. In the United States, however, nothing that concerns public office can yet be kept wholly from politics. The high fees and professional distinction to be attained by service as State expert in criminal cases will be likely to develop the evil influences to a high degree. There are, moreover, difficult questions of detail to be considered by those who favor this system. All sciences are now divided into many specialties. While our specializing tendencies have not gone so far as to suggest the case of the man who had devoted his life to the study of the Greek definite article, and died lamenting that he had not confined himself to the dative case of it, yet proficiency in one department may co-exist with superficial knowledge in closely related fields. Good all-round men, to use a colloquical expression, are becoming scarcer every day. It will, therefore, be no easy task for the appointing powers to select experts qualified to give evidence in the various cases that come before the courts; indeed, it is probable, that if the system should

come into vogue a board of experts would be required for each district. I doubt very much if the medical profession in its present condition could furnish a sufficient number of competent persons to meet the requirements of all the courts of the country.

I leave out of consideration many details which concern the mere machinery of system, such as tenure of office, compensation, method of appointment, extent of authority, though these involve great difficulties in settlement.

Let us assume that some State has inaugurated a system of official experts, and by some happy chance has secured a board including several men of established honor and ability to whom all questions involving expert testimony are to be submitted. Let us further suppose that one of these experts has been duly consulted in the case of a prisoner on trial for murder, for whom a defence of insanity is set up, and whose lawyers have considerable money for defence. If the official report favors the theory of the defence, all may be well; but if the decision is against that theory, the contests between experts will not be set aside, for the Constitution of the United States, and of many States, guarantees the accused the right to be confronted by the witnesses against him, and compulsory process for obtaining witnesses in his favor. Advantage will certainly be taken of this constitutional privilege, and an array of experts produced to contradict the official report. The unseemly contests will not be avoided. To take away this right of contradiction by the defence would be to inaugurate a system of most vicious character. A correct system of jurisprudence lies at the very foundation of happiness. The evils of the social life of the middle ages are often ascribed to bigotry and superstition, but, in reality, a large part of the wrong was wrought by an erroneous system of jurisprudence. Defects undoubtedly exist in the English and American methods, but they depend upon the nature of Ango-Saxon liberty, and they exemplify the humane principle of our laws, that a prisoner is considered innocent until he is shown to be guilty, and that all doubt or error must be resolved in his favor.

Finding then, that apart from the crude manner in which the system of State experts is conceived, it will hardly accord with our methods of trial, we may consider whether there is any other way of increasing the efficiency and securing the ability and impartiality of experts.

Now a large part of such reform undoubtedly depends on advancing the force of honor and conscience in the individual, and is scarcely to be considered here. The influence of example will be powerful for good, and it is to be hoped that a sentiment may be cultivated in the profession which will render it impossible for a man or woman to retain prominence in medical circles while basely selling talent in defence of wrong. It would be, however, a great injustice if lines should be so tightly drawn as to prohibit the utterance of facts, or of opinions based on facts. "Error of opinion may be tolerated when reason is left free to combat it." The vilest criminal, the basest swindler, the most corrupt merchant is entitled to have the facts set clearly forth on the same principle that a physician treats a disease that is the result of vice as readily and as carefully as that which is due to the noblest self-sacrifice.

While systems of education cannot give honor or conscience where these do not exist, or strengthen them where feeble, it is not impossible for selective action to be exerted which will exclude some of the flagrantly unworthy. I look with some hope to the development of an elaborate system of instruction in medical expert work. At the present time medical colleges in the country are dabbling more or less in this line. All of them have courses on medical jurisprudence, but in many cases these courses are like the lithia in mineral waters, principally on the label; that is in the announcement or schedule. If we inquire as to the instruction, we will find it either a brief lecture course, by auxiliary teachers at a nominal salary, or that it is attached to the department of some member of the faculty, who "runs in" a few lectures in the course of the winter. A professor of medical jurisprudence is an impossibility at the present day. The time was, no doubt, when one man could qualify himself to give opinions upon poisoning, infanticide, abortion, rape and wounds, but one small head cannot now carry all that is to be considered upon these topics, and if a single expert is called on to serve in all fields, he will, if not protected by arbitrary exclusions of criticism, be discredited by counter-testimony. Some years ago I succeeded in introducing into

the curriculum of a medical school a course in medical jurisprudence, based upon the principle that each department must be headed by experts. The time assigned by the course was short, but it was divided among the members of the teaching body "according to the gifts which bounteous nature (and experience) did in them serve." The professor of obstetrics lectured on abortion and infanticide; the professor of surgery on wounds, and so on. The result was certainly satisfactory to the class, but unpopular with the faculty, and was abandoned. It is so much easier to elect some lecturer on medical jurisprudence, relinquish the small fee which each professor had received, and worry no longer as to the instruction, especially since the original reason for introducing the course into the curriculum was to comply with the requirements of certain State boards. Such perfunctory work will not give the profession a body of experts qualified to do justice to the grave issues of medical jurisprudence. A year's course of lectures following upon a good medical training, and embodying some elective branches, will go far towards accomplishing reform. I have for years contended that the tendency to specialism should be recognized in our college work, and I think that the fourth year of our present system offers an admirable opportunity to put this plan into operation. I suggest that the course of the medical school be so arranged that the education in general medicine and surgery be finished in three years, which can certainly be done if a good standard of admission is established, and that the work of the fourth year be optional as to various specialties. Among these could be included a course in medical jurisprudence and State medicine, leading to a special degree or at least a special certificate, and in time there will not only be at the command of the community experts in all the various fields of judicial injuty, but in the cities, where the necessity is, of course, greater, there will be the facilities for elaborate and impartial inquiry which a collegiate organization affords. Time will not permit me to treat this matter in more detail. I have simply recorded it as my view that medical experts should be systematically trained for their work.

I do not anticipate, however, that the highest possible development of college methods will remedy fully the evils which are associated with expert testimony. No college has ever shown a capacity to create conscience or morals. These are matters of individual organization. The temptation of professional distinction, public success, and high fees will always be capable of diverting men and women from the paths of truths and justice, and we may expect under any system a continuance of those disgraceful exhibitions which have made medical experts a theme for the sarcastic wit of lawyers and newspapers and the more solemn denunciation of judges.*

*From the current (April) number of the *American Law Register and Review*, I quote the following notes which bear upon two important points in the topic under consideration.

"The Court of Appeals of New York has administered a deserved rebuke to the absurd lengths to which expert evidence is now carried, though in terms much milder than the case warranted. On the trial of the notorious Dr. Buchanan, for the murder of his wife, one of the jurors, while at dinner at a hotel, after the case had been submitted to the jury, was suddenly taken ill, and fainted. Physicians, expert in mental diseases, examined the juror, and gave it as their opinion that he was not affected with epilepsy or paresis; and that his symptoms resembled those of nervous exhaustion due to close confinement as a juror. The juror denied ever having suffered from epileptic attacks, and physicians who had known and attended him, testified that he had never manifested any symptoms of nervous disease. Yet other physicians were found, total strangers, who had no knowledge of the facts other than that gained from the statements of others, who dared testify that, in their opinion, the attack was of an epileptic character, and indicated a mental disturbance that must have existed for several hours, and have rendered his opinion unreliable and useless. This testimony was very properly held not to show that the juror was mentally incapable of concurring in the verdict and, therefore, not good ground for setting it aside. This case, in common with many other recent ones, goes to show how utterly unreliable the testimony of the average expert is, especially when he has a pecuniary stake in the question at issue."

"The Supreme Court of Arkansas, following the weight of authority, has recently held that, in the absence of express statutory authority, an expert who testifies for the State in a criminal case cannot demand extra compensation as an expert in addition to the usual witness fees, at least when he is not compelled to make any preliminary examination or preparation, and is not compelled to attend and listen to the testimony.

"When no demand is made in advance for special compensation, an expert witness can recover only the statutory witness fees."

SURGERY

IN CHARGE OF

GEO. A. BINGHAM, M. D.,

Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children. 68 Isabella Street.

TECHNICS OF MAUNSELL'S METHOD OF INTESTINAL ANASTOMOSIS.

BY FREDERICK HOLME WIGGIN, M.D.

Soon after the publication by the writer, in the *New York Medical Journal* of January 20, 1894, of the report of a successful case of intestinal anastomosis effected by Maunsell's method, a letter of congratulation was received from the late Professor H. Widenham Maunsell, who had recently removed from New Zealand to London. He stated that he was dissatisfied with the published description (*American Journal of Medical Sciences* for March, 1892) of his method of intestinal suture. Last winter, after the publication by the writer, in the *New York Medical Journal* of December 1, 1894, of an article entitled Intestinal Anastomosis, read before this association on October 11, 1894, in the course of which a comparison was made between Maunsell's method and that of Murphy, of Chicago, so much interest was shown in regard to the former method, and so many inquiries were made for information as to various details of the technics, and as to where a description of the method could be found, that a letter was addressed to Dr. Maunsell, requesting him to revise and republish his article. Unfortunately, before this letter reached its destination, Professor Maunsell had died from an attack of the *grippe*. A friend, in announcing the unhappy event, said: "Science has lost a devoted and enthusiastic student." The same letter conveyed a request from Mrs. Maunsell that the writer should undertake the revision and publication of the article which he had requested Dr. Maunsell to rewrite. The task the writer now undertakes as a tribute to the genius which conceived and the courage which first executed this admiral surgical procedure, and as an acknowledgement of the debt which he is confident time will prove intestinal surgery owes to this distinguished surgeon.

Technics of Maunsell's Method of Intestinal Anastomosis.—The patient having been prepared in the usual manner for the performance of a laparotomy, and having been anæsthetized, the operation is begun by making a median incision in the abdominal wall below the navel, extending it upward if it prove to be necessary. This opening permits a quick and thorough search to be made for the diseased or injured portion of the bowel. For operations on the appendix vermiformis, the cæcum, or any part of the ascending or descending colon, the rule is to make an incision over the site of disease or injury, if it can be localized. In all doubtful cases the median incision is to be preferred. The abdomen having been opened, and the portion of the intestine to be excised located, it is brought outside of the cavity, accompanied by about six inches of healthy intestine on eithe rside. It is next emptied of its contents above and below the diseased part by passing it between the finger and thumb and gently compressed. The empty gut should be clamped on either side of the disease portion of the bowel at point six inches distant, to prevent the escape of fæcal matter at the time of excision, or during the subsequent manipulations, either by the clamps devised by Dr. W. S. McLaren, of Litchfield, Conn., or by

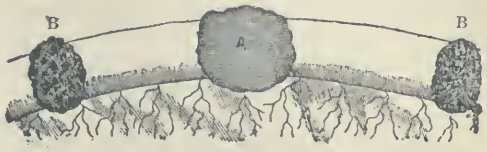


FIG. 1.—A, cancerous, gangrenous, or injured portion of intestine; B. B. sponges with safety pins clamping the empty bowel on either side of the diseased or injured structure.

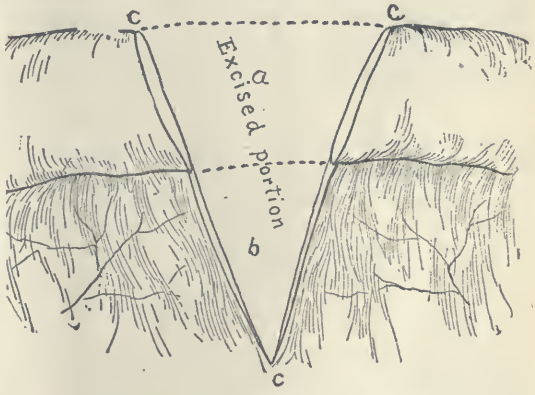


FIG. 2—*a b*, portion of intestine and mesentery to be removed; *b b*, mesentery; *c c c*, lines of the incision.

those improvised as suggested by Maunsell from a safety pin and a sponge, as shown in Fig 1.

The general peritoneal cavity is shut off by flat sponges which have been rendered sterile and wrung out in hot saline solution, and the exposed portion of the bowel should be protected by the same means. The portion of the intestine to be removed is excised by means of a V-shaped incision having its apex in the mesentery and its lateral borders on either side of the diseased point.

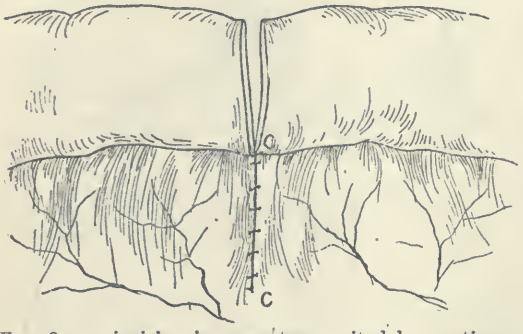


FIG. 3—*c c* incision in mesentery united by continuous suture.

The mesenteric vessels are ligated before being cut by passing a needle armed with catgut around them, and tying it as suggested by Halsted; or they can be picked up and ligated as they are divided. The wound in the mesentery is closed by means of a continuous or interrupted suture, as seen in Fig 3.

After the divided ends of the intestine have been carefully washed with a hot saline solution, followed by a small quanity of a fifteen-volume solution of hydrogen dioxide, the proximal and distal ends are united primarily by means of two temporary sutures which are passed through all the intestinal coats, are tied, and the ends left long. The first suture is placed at the inferior or mesenteric border, and is passed in such a manner as to include a portion of mesentery on both sides, as is shown in Fig. 4, and the second is placed directly opposite at the highest point at the superior border.

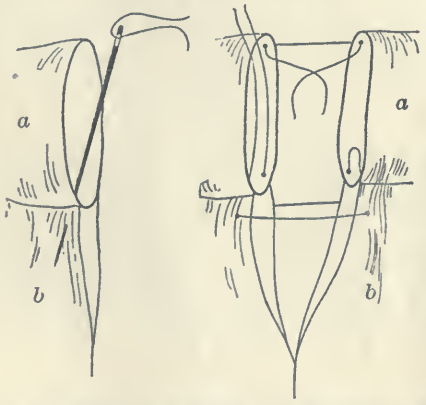


FIG. 4—*a a*, segments of bowel; *b b*, segments of mesentery.

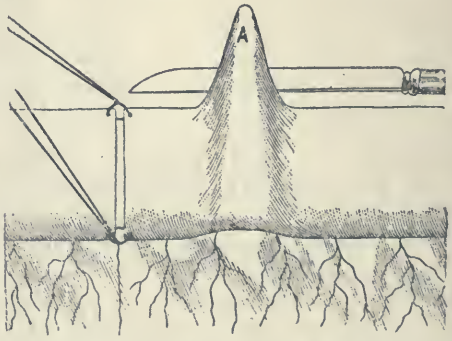


FIG. 5—A shows the point of longitudinal incision made in the superior border of the larger intestinal segments.

A longitudinal incision, an inch and a half long, is next made in the superior border of the larger intestinal segment, two inches from its severed end, by pinching up the intestinal coats between the finger and thumb, and dividing them with a narrow-bladed knife (shown in Fig. 5).

Through this opening a forceps is passed, and the long ends of the temporary sutures are caught up and drawn back through the opening.

By now drawing on these sutures, the ends of both segments of the bowel are invaginated and

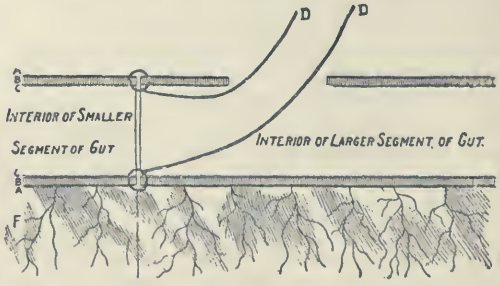


FIG. 6—Longitudinal section of gut, showing A A, peritoneal coat; B B, muscular coat; *c c* mucous coat; D D, temporary sutures passed into the bowel and out through the longitudinal made in the larger intestinal segment; F, mesentery.

made to appear through the longitudinal incision as concentric rings. Figs. 7 and 8 show this to have been accomplished, and the peritoneal surfaces are seen to be in contract on all sides.

The ends of the long temporary sutures previously alluded to are held by an assistant while a fine, straight needle (milliner's No 6.), armed with a strand of horsehair, is passed through all the coats of the bowel and through both sides about a

quarter of an inch from the divided ends. The suture is caught up by forceps, divided in the middle, and tied at once on either side, thus avoiding the confusion that would result if all the sutures were passed before any of them were tied. This process is repeated nine times more, or until

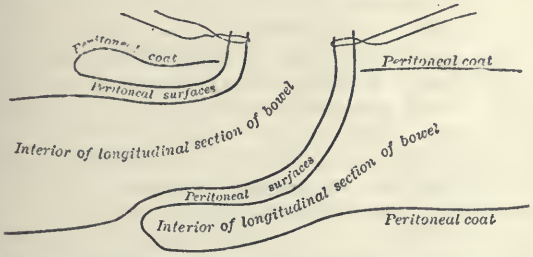


FIG. 7.—Longitudinal section of intestine, showing the relative position of the peritoneal coats of bowel invaginated at the longitudinal opening.

twenty sutures are placed and tied. The temporary sutures, having served their purpose, are cut off short. The cut ends of the bowel are dusted over with either iodoform or acetanilide, and the invagination is reduced by means of gentle manipulation accompanied by slight traction. The edges of the longitudinal opening are turned in, and it is closed by Lembert sutures passed through the peritoneal, muscular, and submucous coats.

Anastomsis of segments of ileum and colon may be effected by this method in the following manner :

A temporary suture is passed through all the coats of the greater and lesser intestinal segments at their mesenteric border, care being taken to adapt this border of either segment to the corresponding border of the other. This suture is tied and the ends left long. A second temporary suture is passed through the side of the larger segment at the point where the superior border

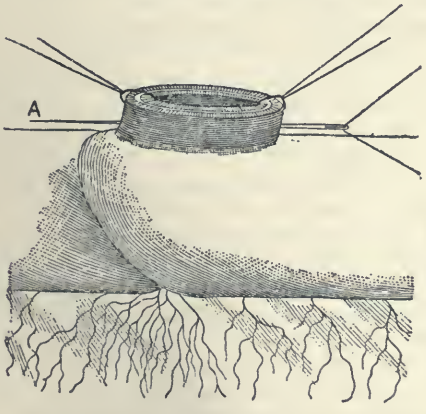


FIG. 8—A shows the needle passed through both sides of the bowel and through all the intestinal coats, and shows that one passage of the needle places two sutures.

of the smaller segment touches it, and through which the suture is also passed through all the coats of the highest free end of the larger segment. The location of these sutures and the accurate adaption of the mesenteric borders of the segments is shown in Fig. 5.

A longitudinal incision is made in the superior borders of the larger segment two inches from the divided gut. The ends of the temporary suture are now drawn through this opening, traction is made, and the free edges of the large segment is inverted and invaginated, and the free edges of the intestine now appear in the longitudinal opening as concentric rings. If the difference of calibre between the two segments is great, a V-shaped portion of the convexity of the larger segment may be removed. This and the method of suturing are shown in Fig. 8.

The intussusception is reduced and the longitudinal slit is closed, as previously described.

Gastro duodenostomy or Gastro-enterostomy.—Prior to the performance of operations on the stomach, the patient is deprived of food for two days and the stomach is cleansed by several

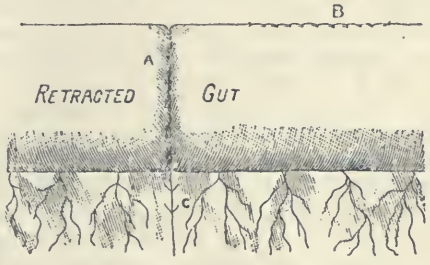


FIG. 9—This figure shows the intestine after the completion of the anastomosis and the reduction of the invagination. A, line marking the point of union between the ends of the bowel, showing that the peritoneal coat is well turned in, and that the sutures and knots are all inside the gut; B, longitudinal slit in the bowel closed by Lembert sutures.

irrigations with an antiseptic solution during this interval. The patient having been anæsthetized and the abdomen opened by means of either a transverse or a longitudinal incision, after pylorectomy, the duodenum, may be united to the stomach by means of this method.

Owing, however, to the partial fixation of the duodneum, this method is only applicable to cases in which the growth is confined to the pylorus. When the disease is extensive, it is better to anastomose the jejunum to the stomach at a point on its greater curvature. Gastro-enterostomy is performed as follows :

A portion of the jejunum, as close to the duodenum as possible, is drawn out of the abdominal cavity, emptied of its contents, and clamped. A portion of the greater curvature of the stomach is also drawn into the wound, and the jejunum is

brought into contact with and united to it by several Lembert sutures in such a way that there will be as little strain as possible on the usual permanent sutures after they are placed and tied. A longitudinal opening, an inch and a half long, is then made in the superior border of the gut. The corresponding opening in the stomach should be an inch above the greater curvature and parallel to it. The extreme ends of these wounds are now united by temporary sutures passed through all the coats of the stomach and intestine, and the sutures are tied, the ends being left long. An opening is now made near the centre of the stomach sufficiently long to allow of the invagination of the openings already made in both bowel and stomach. This having been accomplished, the openings are sutured in the manner already described, the needle passing through all the coats of the intestine and stomach. The invagination is reduced, and the slit in the centre of the stomach is closed by means of Lembert sutures.

When the disease is located in the cæcum or in the ileo-cæcal valve, ileo-colotomy may be peformed as follows, instead of in the manner previously described :

The diseased cæcum having been completely excised, an opening is made in the side of the healthy colon two inches from its cut end ; into this opening the free end of the ileum is inserted. The temporary sutures are applied, tied, and brought out through the cut end of the colon, and, traction being made on them, the cut edge of colon and free end of the ileum are invaginated and drawn through the free end of the colon. The sutures being applied in the manner previously described, the invagination is reduced. The free end of the colon is turned in to the extent of an inch, and the opening is closed by a row of Lembert sutures, care being taken to pass the needle through a few shreds of the submucous, as well as the peritoneal and muscular coats, as advised by Halsted.

When the diseased cæcum can not be excised, owing to the existence of firm and long-standing adhesions formed between this portion of the bowel, theureter, and the iliac vessels, ileo-colotomy should be substituted for ileo-colotomy. The diseased cæcum and the ileo-cæcal end of the ileum having been emptied of their contents, clamps are applied four inches on either side of the diseased structure. The ileum is divided. The end of the ileum which is attached to the cæcum is invaginated, and the opening closed by means of Lembert sutures. An incision is made in the convex surface of the colon large enough to receive the free end of the ileum, which is attached to the edges of the cut in the colon by the usual temporary sutures. An opening is now made in the colon two inches higher up, through which opeing aforceps is passed and the ends of the temporary sutures are seized, and by their aid the free end of the ileum and the edges of the opening in the colon to which it has been attached are invaginated and drawnout through the upper slit in the colon. The permanent sutures are passed as usual, tied, and cut off short. The invagination is reduced, and the longitudinal opening in the colon closed.

An irreducible intussusception is treated in this manner: A slit is made in the intussuscipiens and gentle traction made on the intussusceptum until its neck appears outside the opening in the intussuscipiens. The base is then transfixed with two fine straight needles armed with horsehair, and the intussusceptum is amputated a quarter of an inch above the needles, leaving a fair stump beyond them. The sutures are now passed through the invaginated bowel, caught up in the interior of the bowel, divided, and tied. The ends of these sutures are left long and used as retractors in place of the regular temporary sutures while the other sutures are being placed and tied. This having been done, they are cut off short, the invagination is reduced, and the longitudinal slit is closed. The object of transfixing the neck of the intussusceptum previous to its amputation is to prevent it from retracting, and it also insures the maintenance of the proper relative positions of the different layers.

The various experimental intestinal anastomoses, which in the past few years the writer has performed in accordance with this method on dogs, have proved the following points in the technics to be of consequence :

1. The longitudinal slit which is made in the segment of bowel having the greatest calibre (proximal or distal), and through which the invagination occurs, should be located at least two inches from the cut end of the bowel.

2. The mesentery of both segments must be included in the first temporary suture which is passed at this intestinal border ; this prevents sloughing of the bowel at this point.

3. The sutures should be placed at least a quarter of an inch from the cut intestinal edge ; they should be interrupted, about twenty in number, and should not be drawn too tightly when they are tied.

4. The best suture material for this work is carefully tested and prepared horsehair.

5. The needle best adapted to this work is a round, straight one (milliner's, Nos. 6 to 9).

6. The invagination after the sutures have been placed must be carefully reduced, rather by manipulation than by traction, otherwise the sutures may cut out.

7. In closing the longitudinal slit too much of the intestinal edges should not be turned in or a contraction may result at this point.

The special claim of this method of intestinal suture to recognition and further practical trial

rests upon the lack of special appliances needed for its performance; its adaptability to every portion of the intestinal tract; the ease, rapidity and safety with which an intestinal anastomosis can be effected by its aid; and thus be lost in determining the direction in which the invagination should be made.

The objections made to this operation, which experience has proved groundless, are: First, that the sutures pierce the mucous as well the other intestinal coats. This point Professor Maunsell considered an advantage, for the said "firmly suturing all the coats gives great healing capacity to the ends of the bowels, and the stitches are not likely to tear out." That this objection is not a valid one is proved by the fact that no failure to secure a good result has occurred from this cause in any one of the cases of which we have record where an intestinal anastomosis has been performed in accordance with this method, nor has there been the slightest evidence of leakage having taken place. The second and last objection that has been urged has been the possible danger of cicatricial contraction causing stenosis at the point of union. This fear has proved, in the writer's experience, to be without foundation, the patient upon whom the writer operated (performing enterectomy with removal of six inches of the ileum for a perforation following an abdominal contusion) on September 12, 1893, having remained in perfect health and free from bowel symptoms for more than two years. I now have the pleasure of presenting this patient to you. Again, on October 9, 1894, an intestinal anastomosis according to this method was performed by the writer on a dog before the Litchfield County (Conn.) Medical Association. The dog made a good recovery and remained in good health till April 23, 1895, when he was killed and a necropsy performed before the same association. The intestinal scar at the point of union was barely visible, there was no ocular evidence of contraction, and there was no intestinal adhesions.

It has from time to time been suggested that the sutures have been placed according to this method and the invagination has been reduced, it would be wise to place as an additional safeguard a row of Lembert sutures around the outer side of bowel, uniting again the peritoneal coats of the segments. To this suggestion Professor Maunsell replied in a letter to the writer, dated London, February 25, 1894, as follows: "A double line of sutures should never be applied in intestinal surgery. It obstructs the circulation too much, interfering with firm plastic peritonitis, and in some cases causing gangrene of the inverted portion of the gut."

The writer has been able to collect the reports of eleven cases of intestinal anastomosis effected by this method of suture. Of these operations nine resulted in the recovery of the patient and two were followed by death, which could not in either instance be fairly attributed to the failure of the suture or the method of applying it.

The successful operations were performed by the following surgeons:

1. Frank Hartley, M.D., surgeon to the New York Hospital. Operation performed during March, 1892, and recorded in the *New York Medical Journal*, vol. lvi, pp. 302 and 464.

2. Mr. Stanley Boyd, F.R.C.S., surgeon to the Charing Cross Hospital, London. Operation performed November 26, 1892. Case recorded in the *Transactions of the Medico-Chirurgical Society*, London, vol. lxxvi, p. 345.

3. Frederick Holme Wiggin, M.D., surgeon to the New York City Hospital (Blackwell's Island). Operation performed September 12, 1893. Case recorded in the *New York Medical Journal*, January 20, 1894.

4. Mr. W. Harrison Cripps, F.R.C.S., surgeon to St. Bartholomew's Hospital, London. The case was reported and the patient shown to the London Medical Society at its meeting, November 12, 1894.

5. Mr. Keetley, F.R.S.C., surgeon to the West London Hospital. Case recorded in the *Lancet* for November 17, 1894, p. 1156.

6. Mr. L. A. Bidwell, F.R.C.S., surgeon to the West London Hospital. Case reported to the writer by Professor Maunsell in February, 1895, and to the London Medical Society by Mr. Bidwell, March 25, 1895.

This gentleman has recently informed the writer that the operation was performed upon a woman, twenty-seven years of age, for a rupture of the ileum which occurred in the course of an operation for the removal of an extra-uterine gestation sac of ten months' standing. In reply to the writer's question as to whether or not extra sutures had been employed to approximate the peritoneal coats after the reduction of the invagination, Mr. Bidwell writes: "The only modification which I employed was closing the longitudinal opening in the gut with Halstead's suture instead of Lembert's."

7. Dr. Emmerich Ullman, of Vienna. The operation was performed in December, 1894, only one row of silk sutures being employed. The patient made a good recovery. The case was recorded in the *Centralblatt für Chirugie*, No. 2, 1895; also in the *Annals of Surgery* for August, 1895.

8. Mr. W. Watson Cheyne, F.R.C.S., surgeon to the King's College Hospital London. Case unrecorded. The operation was performed on April 9, 1895. The following history of the case has been kindly furnished to the writer by Mr. Cheyne: "Cancer of transverse colon; excision, Maunsell's method, and recovery. Female, mar-

ried, aged seventy-two, admitted to King'sCollege Hospital, March 27, 1895. Previous history unimportant. In July, 1893, had an operation performed for pain in the abdomen; nature of the operation not known; she says it was about the vagina. Previous to that she had suffered much pain in the right iliac fossa for about eighteen months. She says she was cured as the result of this operation but of late pain has come back in the right iliac region and symptoms of partial obstruction have set in more than once. When she was admitted there was a condition of partial obstruction, but this improved somewhat before she was operated on. On her admission her abdomen was a good deal distended; nothing was felt *per rectum*; *per vaginam* the interior wall of the vagina seemed scarred. On placing the hand on the right side of the abdomen the coils of the intestine are readily felt and great pain is at once felt as the result of the peristalsis set up under chloroform. A hard oval tumor is felt about the umbilicus, which moves freely in the interior of the abdomen. On April 9th the abdomen was opened aud a cancerous tumor of the transverse colon was fouud, together with enlarged glands in the mesocolon and in the neighboring omentum. The bowels were clamped by Maunsell's safety-pin method and the disease was removed. Repair by Maunsell's method. Uninterrupted recovery. Patient well when I last heard." To this Mr. Cheyne adds: "I found Maunsell's method very difficult in this case. The obstruction had evidently lasted a long time, and the longitudinal muscular bands of the intestine above were enormously hypertrophied and formed rigid bands, and the difficulty of invaginating that end of the gut was extremely great. In a case of old-standing obstruction I would not again use Maunsell's method."

9. Dr. Robert T. Morris, professor of clinical surgery in the New York Post-graduate Medical School and Hospital. The operation was performed in the writer's presence on September 19, 1895. On October 11, 1895, Dr. Morris reported the patient's convalescence to have been uneventful. —*N. Y. Med. Jour.*

A SAFE AND SURE METHOD OF REDUCING ENLARGED TONSILS.

BY H. W. KENDALL, M.D.

The etiology of acute and chronic tonsilitis seems settled in the minds of all pathologists, but my experience points to a cause entirely overlooked by all the authors that I have consulted. Superacidity of the prima viæ is in my opinion the essential cause of both the acute and the chronic disease, the catarrhal accidents being merely excitors.

I think that in every case of acute or chronic inflammation of these glands the salivary secretions will be found acid instead of alkaline, and that free doses of potassium or soda locally applied and ingested will give most rapid relief. The anatomy of the tonsil is well understood, but the great variation in the size and number of excretory ducts has not been particularly pointed out. These ducts are greatly enlarged in either acute or chronic hypertrophy of the glandular structure unless contracted by astringent or caustic applications. Since the general disuse of astringent gargles, suppurative cases are rarely seen. Cauterization, once the general practice, is now almost abandoned for the reason that it is obstructive and converts the acute into the chronic condition.

We have an efficient cauterant and at the same time an antiseptic and alterant in pure hydrochloric acid, which is always friendly to human flesh. This is the agent that I have found so efficient in reducing enlarged glands in all parts of the body, but the method of using it is the particular point that I wish to present in this short paper. My method is the use of capillary glass tubes (Bohemian or Whital and Tatum's glass), one-eighth of an inch caliber, heated in a Bunsen flame and drawn to a point, the shaft of the drawn part two inches long with caliber one sixty-fourth of an inch, broken off and fire polished. Now if the shaft of the tube is five inches long the drawn part will hold, after dipping in a fluid, one minim; if the larger shaft is increased in length it will hold more. When the point of this tube touches any substance it will deposit a fraction of the drop; by long contact it will deposit all that it contained.

I dip these tubes into pure fuming hydrochloric acid and push them into the excretory ducts of the tonsils, three in each gland at each sitting, twice a week. This operation is painless and produces no inflammation or swelling. Five or six applications are sufficient for moderately enlarged glands. Nitric acid used in the same way will produce swelling and sloughing. Chromic acid so used is rapidly effective, but I abandoned it for ever after producing tetanus in a malignant case.

The advantages of this mode of application are the ability to deposit a definite and minute amount of acid and avoidance of strangulation and choking effects of the fumes. After ten years' experience with this treatment I can quite positively say that in my opinion tonsils ought never to be removed with knife or scissors.

If a local anæsthetic is desired a saturated solution of bromide of potassium and bicarbonate of soda is better than cocaine because the latter produces subsequent delirium or dizziness with asthmatic breathing in many cases.—*Jour. Am. Med. Assoc.*

MEDICINE

IN CHARGE OF

N. A. POWELL, M. D.,

Professor of Medical Jurisprudence, Trinity Medical College ;
Surgeon Out-door Department Toronto General Hospital ; Lecturer on Practice of Surgery,
Woman's Medical College. 167 College Street.

A CASE OF PHTHISIS APPARENTLY CURED.

The following noteworthy case was seen in consultation with Dr. W. Duffield Robinson. The patient was a woman of 21 years. The family history revealed a decided taint of tuberculosis, her mother and several other members of both sides of the family having died of phthisis. Her mother died in the spring of 1892.

In March, 1891, the patient suddenly began to lose flesh, her appetite became poor, her digestion much deranged, cough and expectoration appeared, and general debility followed so rapidly and overwhelmingly that when first seen during the latter half of the month, she was already bedridden. At that time her condition and physical signs were as follows : She was extremely emaciated, weighing but 100 pounds. Fever was constant, very irregular, and with a high evening rise. She suffered nightly from the most profuse and exhausting sweats. Her appetite was entirely abolished, the stomach was so irritable that the slightest cause would provoke the most violent attacks of vomiting. Cough was persistent and expectoration very free, the daily average was eight fluid ounces of thick, tenacious, heavy sputum. In the right apex and over the base of the left lung were signs of consolidation,—increased fremitus, dullness on percussion, bronchial breathing with fine crackling râles and a few bubbling râles. The sputum contained myriads of tubercle bacilli ; the bacteriologist regarded the abundance of bacilli as the most extreme in his experience, hundreds could be counted in one field. An unfavorable prognosis was, of course, the only one that seemed justifiable.

The patient was placed upon a diet of egg-albumen, which seemed to agree with her stomach better than any other food, and this diet was forced so that she consumed daily the albumen of two dozen eggs. The medicinal treatment consisted of 1-100 of a grain of strychnine nitrate with 1-1000 of a grain of atropine sulphate, every two hours hypodermatically ; and 1-50 of a grain of strychnine nitrate with 1-12 of a grain of the double chloride of gold and sodium, and ½ of a grain of a vegetable digestive every two hours by mouth. After a few days the amount of gold and sodium was increased to ⅛ of a grain every two hours. She was given cod-liver oil inunctions, and general massage with passive movements once daily. At first she showed signs of strychnine intoxication, and the dose was reduced, but she soon resumed the original dose, and after the first two weeks she bore the drug well, although always just behind the border-line of its toxic action. During April she improved decidedly ; she regained flesh, the fever became less marked, the night sweats less profuse, the cough was allayed, and the expectoration much reduced, though rich in bacilli. During May the improvement was very rapid. By the latter part of the month she had recovered her normal weight, 125 pounds. The fever and night sweats had disappeared, the appetite was good and the digestion normal, the cough was almost gone, and tubercle bacilli had disappeared from the sputum, which was still expectorated in very slight amount. All signs of consolidation in the right apex and base of the left lung had disappeared, the only remaining sign was slightly harsh breathing at those sites. She was instructed to continue her general treatment, to return to a normal diet, to practice forced, deep breathing and graduated exercises, and was sent to the mountains. In September she returned to the city in perfect health. Her weight was 132 pounds ; she was robust and muscular, with better chest expansion than she ever possessed before in her life. There was no cough or expectoration, the lungs were in all respects entirely normal, except for a patch of emphysematous breathing in the base of the left lung. She reentered upon her social duties and has since led a busy life. Her health continued perfect until early in August, 1895, when she had a slight attack of pneumonia involving the base of the left lung. The sputum was sparse, resembled prune-juice, and was crowded with pneumococci and tubercle bacilli. The attack ended by crisis on the eighth day, and a few days later she was again sent to the mountains. She returned in ten days with a recurrence of all the symptoms of the attack of two years previous. Her weight had fallen to 114 pounds, there were anorexia, fever, cough, and free expectoration, which was full of tubercle bacilli. In the base of the left lung was consolidation with moist râles. She was placed on the

same treatment given her during the first attack, and she rapidly regained flesh and strength. On November 1 her weight was again up to 124 pounds, all fever was gone, the cough and expectoration had almost disappeared. Tubercle bacilli were not to be found since the last week in October. The consolidation had become greatly reduced, but was still present, when a few days later she was again sent to the mountains.

Noteworthy points in this case are: the sudden onset, something like general miliary tuberculosis; the large number of bacilli; the rapid recovery, all the more remarkable with a pronounced tubercular family history; the complete disappearance of consolidation and bacilli; the acute re-appearance after two years, of the whole train of symptoms, with signs in the base of the left lung directly following an attack of pneumonia located in that vulnerable part; the large number of bacilli and their early complete disappearance in the second attack; the abatement of the consolidating process, and the rapid recovery of the general health after the second attack; the absence from the treatment of all cough medication and antiseptics, and the large doses of strychnine nitrate and the double chloride of gold and sodium, with which the system was kept literally saturated.—Wm. Pepper, M.D., LL.D., in *Univ. Med. Mag.*

THE KNEE-JERK IN DIAGNOSIS.

Primarily, the knee-jerk depends on the integrity of the reflex arc, situated in the third or fourth lumbar segment. The ordinary and customary method of testing the knee-jerk, while the person's legs are crossed, may suffice when it is quite active; but the utmost care is necessary when there is any doubt as to the character of the reaction. It is never safe to say that the knee-jerk is absent, unless repeated and varied tests have been made with the clothing removed. The exaggeration or absence of the knee-jerk, *per se*, is not pathognomonic of any special type of disease; corroborative signs must be present. The absence of the knee-jerk is of more positive value than its exaggeration. A lesion which involves the posterior roots or the posterior columns in the region of the second, third, or fourth lumbar segments, such as tabes or transverse myelitis, causes the abolishment of the knee-jerks, and these are the only lesions in the sensory tract that are known to cause such a loss. A lesion involving the motor portion of the reflex arc, such as acute or chronic anterior poliomyelitis, or multiple or isolated peripheral neuritis, affecting the anterior or crural nerves, will also abolish the knee-jerk. The knee-jerk is present in children over three years of age.

1. Loss of knee-jerk associated with severe paroxysmal pains in the lower extremities, with incontinence of urine or slowness in emptying the bladder, with preservation of muscular resistance, with or without incoördination, with or without objective sensory symptoms, is indicative of organic changes in the lumbar segment of the cord, such as tabetic degeneration or a lesion of the posterior nerve roots.

2. Loss of knee-jerk associated with diminished muscular resistance or evident paralysis of the lower extremities, pain in the course of the nerve trunks with tenderness on pressure, some atrophy and quantitative decrease in faradic irritability, with or without objective sensory disturbances and the absence of bladder symptoms, is a clinical picture of multiple neuritis.

3. Loss of knee-jerk with flaccid paralysis, atrophy, and loss of faradic reaction in the quadriceps, and the absence of all sensory symptoms, indicates a poliomyelitis in the lumbar portion of the cord on the same side.

As a general rule the knee-jerk does not disappear so long as there exist in the reflex paths a certain number of healthy muscle and nerve elements. On the other hand, in all lesions which affect the nerves in their totality, the knee-jerk is abolished. In all cases of transverse myelitis, spinal cord hæmorrhage, and traumatisms of the cord, if we observe the abolition of the knee-jerks, an unfavorable prognosis should be given. In all cases of chronic, organic intracranial disease, in which indications of the position of the lesion are absent, the occurrence of this symptom suggests a cerebellar process. Changes in the unilateral reflex permit of the diagnosis of a one-sided lesion with great certainty, while an involvement of the reflexes on both sides, excluding polyneuritis, always indicates an affection of the central nervous system in its totality. The knee-jerk is occasionally absent in the early stages of meningitis; it is also absent when there is a supervenosity of the blood, in asphyxia from coal-gas, and in the acute stages of some cases of apoplexy. In distinguishing a genuine epileptic convulsion from simulation, we must consider the absence of knee-jerks and the absence of light reflex with dilated pupils as crucial tests in excluding simulation. The knee-jerk is absent in cases of diabetes only when there is peripheral nerve degeneration. Any obstructive or destructive process involving the upper or cerebro spinal segment of the motor tract is likely to occasion an exaggeration of the knee-jerk. Should the lesion be situated above the crossing of the motor tract, the exaggeration occurs upon the opposite side of the body, while a lesion below would manifest its symptoms on the same side. This exaggeration may be demonstrated after the administra-

tion of certain drugs, as bromide; it may exist, attending primary or secondary degeneration affecting the lateral columns of the cord; it may exist in some cases of hemiplegia, from hæmorrhage in the internal capsule; lastly, it may exist in the early stages of paretic dementia, except in those cases in which the posterior columns were primarily involved. As the knee-jerks are often pronounced or excessive in neurasthenia, hysteria, alcoholism, and mental fatigue, we must admit that in many instances the interpretation of such a symptom is more difficult than the interpretation of the absence of knee-jerks.—Wm. Leszynsky, M.D., in *N. Y. Med. Jour.; Internat. Med. Mag.*

A CLINICAL NOTE ON THE TREATMENT OF EPILEPSY BEFORE THE HABIT IS FORMED.

BY E. D. FERGUSON, M.D.

Though many links in the chain which would represent the complete pathology of epilepsy are lacking, enough is known to furnish occasionally a clue to rational treatment, and whether our measures may be addressed to some etiologic factor or be symptomatic as the administration of the bromides for the control or diminution of the attacks, it seems fairly evident that in the majority of instances the longer and more frequently the seizures have been occurring the greater will be the difficulty in abolishing them or diminishing their frequency.

In a general way, the influence of long-continued recurrence is recognized under the name of habit, and is no doubt to be accorded some importance; for it will scarcely be necessary to adduce illustrations of the influence of habit on many of the functions of the body.

Undoubtedly, in the treatment of epilepsy, more brilliant results will obtain in those cases in which the cause is ascertainable and of such a nature and so situated that it can be efficiently treated, and in particular will we be entitled to expect a successful result if the case comes under observation while still showing only the minor forms of its manifestations; but even when we are unable to direct our measures from an etiologic standpoint, and must rely upon the ordinary routine means, if the treatment be thorough and energetic, begun at an early date and continued for a long period, we may cure some cases that would prove incurable if subjected to treatment at a later date. This applies to the cases subjected to any therapeutic whether surgical (at any point from the vertex to the soles of the feet) or medicinal, as the usual course of the bromides. In these cured cases, however, there is occasionally a lingering doubt that those presenting only the minor manifestations might fail to develop into *le haut mal*, but no one can doubt that a proportion still remains in which if *le petit mal* be relieved the patient is saved from the greater events of the disease.

By way of illustration, I will cite two instances of the minor form, presumably of reflex origin, and associated with that somewhat overworked source of irritation, phimosis.

The first case, a boy about six years of age, had for several months been noticed to act peculiarly during urination. That fact was reported to me, and I requested the parents to note carefully the events occurring at that time; the report embraced the statement that he would defer the act as long as was practicable, and then, when about to accomplish it, would seem agitated as by fear; his face would become pale, he would start backward a step or two, his body would become rigid, and there appeared to be a momentary unconsciousness; but as the urine began to escape these symptoms would diminish so that at the completion of the act, or a few moments thereafter, he would be ready to resume his play or studies.

It was some time before I saw the child for examination, for in response to my inquiry as to the condition of the prepuce, by a mistake I was told it had been examined and pronounced in a normal condition, but the symptoms becoming more pronounced and the evidence of a brief loss of consciousness becoming stronger, I insisted on seeing the child, and an examination showed a phimosis with a pinhole orifice, and at the incision I found the prepuce strongly adherent to the glans over quite a portion of the surface. For two or three weeks after the incision the symptoms continued, but in a gradually diminishing degree, the diminution apparently keeping pace with an increasing confidence that the old sensations had been removed, and finally the trouble definitely ceased without the administration of any drugs.

The other case was that of a lad ten years of age, who had shown no trouble prior to seven months of age, aside from measles when five months old. The first signs consisted of slight convulsive seizures, consisting mainly of rigidity of the muscles of the trunk and oscillation of the eyes, though at eight months there was some paresis of the right side which persisted for quite a period. For about eight years the attacks recurred on the average from three to six times daily, were brief in duration, and were not followed by somnolence, but the frequency would be increased during the continuance of intercurrent illness. During the following two years the attacks did not notably increase in frequency, but they became somewhat more severe, and were followed by a stupid or drowsy state. The father consulted me concerning him in an incidental way, and I advised that he should have him examined, particularly in re-

ference to natal or post-natal injury to the head and the condition of the genital apparatus, for he described the act of urination as difficult and spasmodic. In the meantime I advised the use of bromides to try and control the habit element. As he lived a long distance from me, I heard nothing from the case for some months, when, being in the neighborhood of his home on another case, I again was consulted, and found a well-developed boy of 10, apparently in good health in every way except the convulsive seizures, and some defect in the motility of the right side, presumably due to a mild attack of polio-myelitis in his early infancy. There were defective educational development and somewhat peculiar manners, both of which were doubtless in a measure the result of his having been kept from other children and from school.

The bromides had stopped the convulsions for nearly six months, but they had begun to recur. A tight and adherent prepuce furnished one ground for interference, and I advised that the phimosis be removed, which was done somewhat later, and thereby he was relieved of his urinary trouble, but after a time the convulsions recurred, and he will probably become a confirmed epileptic, though I am convinced that an early operation and efficient medical treatment, particularly if instituted before the epiieptic habit had been formed, would have resulted in a cure.

Another case of reflex influence interested me very much. It occurred in the practice of a medical feiend, early in my professional work and before the use of the bromide had become so common. The patient, a man, had had several epileptic attacks, when, during an examination of his body for general diagnotic purposes, and while manipulating one foot, a paroxysm occurred. The same event having been repeated at another and not remote occasion, a more critical examination disclosed a small subcutaneous tumor on the dorsum of the foot, and pressure thereon produced a more or less complete epileptic attack. Excision of this growth resulted in a definite recovery.

Another instance will serve to illustrate the importance of thorough measures in the early stages of the disease. A young woman consulted me on account of a single convulsive seizure which had occurred a day or two beforo. Though realizing fully the fact that a single attack had slight diagnostic value, the description of the fit, as witnessed by a friend, led me to suspect so strongly that it was epileptic that I at once placed her on a bromide treatment, with directions to make certain increase in the dose in case of a recurrence. In a short time she had another attack, and then another, so that she had several within a few weeks. After each fit the dose of bromide was increased, until finally the intervals increased, and after about three months she had the last attack. The dose of bromide of potash had then reached a little more than two drachms daily, and was continued at that amount for upwards of two years, and then gradually diminished, so that it was stopped at about four years from the commencement of the treatment. This case, like the majority of cases of epilepsy, furnished no evidence as to causation or pathology, and was treated entirely on an empirical basis. If the attacks had been allowed to continue for quite a time, it is fair to assume that the condition would have become more difficult of control, and probably incurable.

I am fully aware that this note contains nothing new, but it has assumed, as is clear to me, that the utility of energetic measures in the early stages of the disease has not been adequately urged or appreciated, and it is then, if at all, that we may hope to eliminate one factor, a minor one though it be, in the continuation of the disease, *i. e.*, the element of habit.—*Jour. Amer. Med Assoc.*

TREATMENT OF GLANDULAR TUBERCULOSIS. CLINICAL LECTURE.

I shall speak to you to-day upon the important subject of the treatment of glandular tuberculosis as illustrated by the young man you see here and on whom we are about to operate for a number of such glands in the cervical region.

In the first place, what is glandular tuberculosis? For a long time it was confounded with scrofula. At present, we know that scrofula is of tubercular character. But is it always so? Certain clinical facts as well as experimentation answers in the negative. In 1871, before the discovery of the bacilius, Shüppel defined in the scrofulous glands the miliary tubercle—masses infiltrated with giant cells. This author has shown pathologically that a good proportion of these engorged glands usually considered strumous are, in reality, tubercular. In 1882 Koch discovered the specific bacillus and demonstrated its presence in two out of every three of these swellings. Moreover, in making these inoculations, he and his assistants found that the glands in which the bacilli were absent, or at least were not found, would give tuberculosis to animals inoculated with their contents. Since then, we have come to deny the existance of the latter and have called everything tuberculosis.

From an etiological stand-point we may divide this form of adenitis into two classes—primary and secondary. But can a primary affection of the glands exist? We must admit it although it is impossible to find the point of entry of infection and although neither in the lymphatic system nor anywhere else can be found either the origin or process of infection. But that point of entrance

by reason of its minuteness, easily escapes detection. The slightest abrasion of the skin—a pharyngitis which deprives the mucous membrane of its epithelium—trivial excoriations of the nose or of the scalp, furnish an opening for the entrance of the bacilli into the lymphatic system.

The secondary form, however, is very easy of recognition. It has a very palpable point of origin and, in most cases, the primary lesion persists after the occurrence of the resulting adenitis. In the neck the origin of the enlarged glands may be found in tubercular lesions of the tonsils, tongue, pharynx, nares and scalp. In the axilla similar lesions of the mammary gland and the various joints (white swellings), in the groin, tuberculosis of the rectum, and like diseases of the knee or ankle. The most frequent lesions are those of the neck (80%); then come those of the axilla and groin. The course of the affection is sometimes quite rapid but usually very chronic. In certain cases, notably in children, one observes a progressive shrinkage or retrocession of the tumor which finally disappears without leaving a trace of its former existence.

In other cases there is observed a sclerotic or fibroid transformation of the gland structure similiar to that observed in the lung tissue. These nodules are hard, round, movable, and of an indolent character. At the end of 15 or 25 years, however, there may be witnessed in them a revival of the infectious process. The terminations which are the most frequent, however, are caseation and suppuration—the last being the second phase of the caseation of the tubercular nodule. This cheesy transformation is perhaps very rapid without ending in suppuration. Then at the autopsy one finds no trace of pus but a nodule filled only with these caseous deposits. This is what occurs in acute adenitis. Suppuration, however, which is the natural termination, is more frequent. This tubercular abscess results not only from the caseation, but from suppuration of the inflammatory capsules of the tubercle. Indeed one often meets with periadenitis, the result of tubercular changes in the surrounding tissues and accompanied with affection of the interglandular lymphatics, which become a thick network uniting the previously isolated foci and forming at a more or less early period, adhesions which result in nests of ganglia.

Treatment.—Medical treatment is proper in all forms of glandular tuberculosis and is always of great importance. It is often of itself sufficient to remove engorgements of this nature. The best internal medicament is cod liver oil, which is beneficial from many points of view. Externally, massage and baths may be used. The former is indicated when the tumor is in process of absorption. Compression also, when it is applicable, is an excellent adjuvant. As topical applications iodine or mercurial ointments, or Vigo's mercurial salve may be employed. As a rule mercury has a very constant and happy effect upon lymphatic glands.

Baths.—Sulphur, chloride of sodum and the like. The saline are more efficacious than the sulphur baths as are also the mixed or alkaline-arsenic waters. The best form, however, of this kind of medication is a sojourn at the seaside. The success attained every year by a residence at the various coast resorts, as Berck-sur-mére, for instance, is strong evidence in behalf of its curative properties. Surgical treatment consists in interstitial injections, incision and curetting and lastly excision. The injection may be made with from five to ten drops of the tincture of iodine. In my own hands, however, this treatment has not succeeded in any one instance. It is considered specially efficacious when the gland is undergoing the process of softening. The injections of iodoform in ether (Verneuil) have given excellent results. In the course of these there has been observed in some cases, a cystic degeneration of the engorged gland. Fowler's solution in progressive doses (8 to 12 drops) which has been advocated in this connection has not given very favorable results (Reclus).

Incision and Curetting.—When the glands are fully softened but surrounded by strong adhesions this is an excellent procedure. In short, the total extirpation of masses of ulcerated glands occupying sometimes the whole half of the neck and traversed by fistulous tracts which involve and affect a large portion of the integument, is oftentimes impossible. In the neck, moreover, one should avoid making large incisions which often result in deforming cicatrices, and content himself with making a small opening in the most dependent portion, performing a rapid curetting followed by a little drainage. This will result in quite a rapid cure.

Extirpation.—This is the most rational operation and the one superior to other modes of treatment. For a long time popular, it is to-day employed exclusively by some surgeons for the bacteriological and infectious nature of glandular tuberculosis, according to the modern pathology, favors total extirpation to the exclusion of all other methods. It may be stated, however, that the latter has not fulfilled all the hopes based upon it.

The points in favor of extirpation are :

1. It does away with the suppuration which, through secondary infection, impairs the general condition of the patient.

2. When through non-interference the glands are allowed to suppurate and open spontaneously unsightly cicatrices result.

3. One arrests by this means the general tubercular condition and infection of the organism.

Contra-Indications.—1. Tubercular adenitis is

very often secondary, consequently extirpation has no effect upon the primative cause but is only a palliative measure.

2. Extirpation favors metastasis. Though this is a rare complication it cannot be ignored. It is due, in these cases, to inoculation sustained during the operation.

3. Even if extirpation is adopted from choice one is, however, obliged sometimes to abandon it when the number of glands is very great, although I have removed sixty-two in a single subject.

4. It is claimed that the cicatrices from incisions are unduly prominent but they are not retracted and hence do not greatly disfigure the parts.

5. Recurrence is very frequent. This is the greatest objection. It is true that relapse occurs in 25 to 50 per cent. Moreover, when the adhesions are strong, and when total removal is difficult, this procedure becomes less necessary. When suppuration is very free curetting is preferable.

When Should one Perform Extirpation?—When internal medication has failed. When the glands involve the face and by their great size produce severe deformity.

When they are isolated and not numerous.

When they have undergone fibrous degeneration.

When they are not freely suppurating.

General Contra-Indications.—Impaired general health when there exist tubercular deposits in the lungs and joints. In such cases relapse is almost inevitable.

When the ramifications of the glandular chain are very extensive, badly placed and difficult to reach, relapse is probable.—Prof. Le Dentu in *New Eng. Med. Monthly*

Calomel as a Substitute for Iodoform.—An Italian physician, Dr. G. B. Percacini, is in the habit of replacing iodoform by calomel for dressing all kinds of wounds and sores, more particularly ulcers of the leg, as well as eczemata resisting ordinary treatment. Where applied, in the form of powder, to a wound which has first been thoroughly cleansed, this substance forms an antiseptic crust, strongly adherent, and when this becomes detached the wound is found to be completely citatrized. According to Dr. Percacini, the use of protochloride of mercury for dressings is contra-indicated only in cases of wounds and sores with excessive secretion, seeing that in such cases the pus would be retained under the crust formed by the powdered calomel.—*Med. and Surg. Rep.*

Massage in the Treatment of Acne of the Face.—In a communication made to the Dermatological Society of Moscow (*Dermatologische Zeitschrift*, Band ii. Heft 3), Pospelow calls attention to the good results which he has obtained from massage of the skin of the face in the treatment of acne in this situation. By means of massage the lessened tone of the skin, and especially of the sebaceous glands, is increased, and the thickened sebaceous matter expressed from the ducts of the glands. The rubbing should not be done at random, but should follow the direction of the gland ducts and the muscle-fibres of the skin in order that the sebum may be expressed from the glands. Massage should be done for ten minutes at a time, morning and evening, for several months, until the tone of the skin is restored and the openings of the sebaceous glands have diminished to their normal size. — *Am. Jour. Med. Science.*

Idiot Skulls. — Sir George Humphrey has examined nineteen specimens of idiot skulls, and finds nothing to suggest that the deficiency in the development of the skull was the leading feature in the deformity, and that the smallness of the bony cerebral envelope exerted a depressing or dwarfing influence upon the brain, or anything to give encouragement to the practice lately adopted, in some instances, of the removal of a part of the bony case, with the idea of affording more space and freedom for the growth of the brain.—*Lancet.*

Professional Opinions of Ingluvin.—Edward Warren (Bey) M.D., C.M. :—"Hereafter I shall prescribe Ingluvin liberally and with great confidence in its therapeutic value."

Charles Low, M.R.C.S.E., etc. :—"Medical men will never regret using Ingluvin."

Edward Cotten, D.N., C.P.P., London :—"Ingluvin is particularly efficacious in vomiting produced by pregnancy."

Waldo Briggs, M.D. :—"I have used Ingluvin extensively and find it far superior to any remedies for vomiting of pregnancy, dyspepsia and indigestion."

Carotid Aneurysm.—Two cases of aneurysm, at the root of the neck, both right-sided, presumably carotid, came under the notice of Doctor S. Solis-Cohen. Treatment consisted in rest and the administration of sixty grains daily of hydrated Chloride of Calcium. Marked improvement occurred in one case—the same as was observed in a case of innominate aneurysm that came under the Doctor's care two years ago. In the other case no change has yet been noticed.—*Philadelphia Polyclinic.*

Dr. Geo. Dock, at present Professor of Practice of Medicine and Pathology in the University of Medicine, Ann Arbor, has been elected Professor of Pathology and Bacteriology in the Jefferson Medical College.

OBSTETRICS AND GYNÆCOLOGY

IN CHARGE OF

J. ALGERNON TEMPLE, M.D., C.M., M.R.C.S., Eng.,

Professor of Obstetrics and Gynæcology, Trinity Medical College;
Gynæcologist Toronto General Hospital; Physician to the Burnside Lying-in Hospital.
205 Simcoe Street.

ECLAMPSIA: ITS TREATMENT AND A REPORT OF ONE HUNDRED AND TWENTY-SIX CASES OBSERVED IN THE LEIPZIG MATERNITY HOSPITAL.

BY PROF. PAUL ZWEIFEL.

The material consisted of: *Primiparæ*—ante-partum, 22 with 5 deaths = 22.7 per cent.; intrapartum, 31 with 4 deaths = 12.9 per cent.; post-partum, 13 with 2 deaths = 15.4 per cent. *Multiparæ*—ante-partum, 7 with 0 death = 0 per cent.; intra-partum, 4 with 1 death = 25 per cent.; post-partum, 6 with 0 death = 0 per cent. In 43 cases it could not be stated whether the first convulsion occurred ante or intra-partum, these patients having entered the hospital in an unconscious condition. Zweifel divides the cases into two groups, the first one comprising all cases from April, 1887, to January, 1892, during which time the disease was treated under the expectant plan, while after January, 1892, the more aggressive methods of Dührssen were adopted with some modifications.

The expectant plan consisted of hot baths, wet packs, and the administration of large draughts of lemonade and liquor potassii acetatis; it aimed to augment the action of the skin and kidneys, in the hope that thus the noxious organic substances circulating in the blood and responsible for the eclampsia would best be removed from the body. Jaborandi and its alkaloid were not given, on account of their tendency to produce œdema of the lungs. Protracted chloroform inhalation was rarely resorted to, as both chloroform and morphine increase the liability to fatty degeneration of the heart. Pulmonary œdema formed in a few cases the indication for venesection. Speedy delivery without forced dilatation of the cervix formed thebstetrical treatment. e-

Dührssen's method aims to deliver at once, pr t ferably after the first convulsion. If the sof g parts are undilated they are dilated by incision into the cervix and introitus vaginæ. Chloroform must be administered to the surgical degree, but only during the operative manipulations. The different results of the two methods are quite striking, and largely in favor of the aggressive treatment. The cases treated expectantly consisted of 49 cases with 16 deaths = 32.6 per cent., while 80 cases with 12 deaths = 15 per cent., were treated after Dührssen. Although Zweifel agrees with Dührssen in the advisability of a speedy emptying of the uterus, his experience shows different and less favorable results. Dührssen claims that the convulsions cease in 90 per cent. after the uterus is empty, while Zweifel found the convulsions to continuc in 48 per cent.

The author also finds that the deep incisions of the cervix are not so free from danger as is commonly supposed; he observed some very alarming hæmorrhages, which in one case caused the death of the woman. The tamponade of the uterus and vagina with iodoform gauze did not always suffice to stop the bleeding, and ligation of the bleeding points became sometimes necessary. For these reasons he warns the general practitioner to be cautious in incising the cervix, as he might be held responsible for having caused a fatal hæmorrhage. In one case death was due to iodoform poisoning after tamponade of the uterus with iodoform gauze; he therefore recommends as a substitute sterilized gauze. Zweifel believes that the favorable results of Dührssen's method are due not so much to the rapid delivery as to the accompanying hæmorrhage. He has seen the most striking improvement following venesection, and he deplores the fact that such a rational and excellent method of treatment has been completely abandoned, but he predicts its revival. It reduces the blood pressure and lessens the liability to apoplexy. The symptoms of a threatening eclamptic attack are headache, pain in the stomach, and ocular disturbances, accompanied by marked œdema and albuminuria. If this group of symptoms is present the patient must at once be placed upon a milk or vegetable diet; labor should be induced.

Albuminuria was present in every one of the one hundred and twenty-six cases. It was found that if the urine is strongly concentrated and contained blood the prognosis is hopeless. Cases in which immense quantities of albumin were present ended in recovery, but the gravity of the case is proportionate to the quantity of albumin A rapid, feeble pulse, although a serious symptom, need not preclude recovery. During the attacks the pulse becomes generally feeble and rapid, but

if the pulse does not improve between the convulsions the prognosis is grave. An early rise of the temperature is an alarming symptom; a rapid and steady rise stamps the case a hopeless one. This temperatuae rise is not, as is commonly supposed, caused by an increased muscular action, but is a result of an intoxication from the organic substances which are retained in the circulation and responsible for the venous thrombosis and necrotic processes in the liver.

The intermediate products of tissue change as the cause of eclampsia.—W. N. Massin has made a large number of physiological experiments which have demonstrated the importance of the normal liver function for the various processes of oxidation in the animal economy, and the physiological and toxicological consequences of carbonic acid. Carbonic acid results from an incomplete oxidation of nitrogenous substance, and its injection or artificial production in animals, causes a train of symptoms closely resembling eclampsia. The microscopical examination of the liver in cases of eclampsia shows pathological changes which preclude a normal liver function, and the kidneys and other organs present the picture which we are wont to find in cases having perished from organic poisons. Based upon these investigations, Massin formulates the theory that eclampsia is the result of a disturbed liver function conditioning an incomplete oxidation and the consequent production of carbonic acid. A urinary analysis of several cases of eclampsia tends to show that: (1) eclampsia is undoubtedly the result of an auto-infection; (2) oxidation of nitrogenous substances is markedly reduced; (3) leucomaines increase enormously before the convulsions, to diminish rapidly, after the convulsions and during convalescence. In the body of every pregnant woman, but especially towards the end of gestation, there circulate increased quantities of incompletely oxidized substances—leucomaines. These become excessive if the functions of the kidney and liver are faulty. But even this abnormally large amount of toxic substances will not produce serious symptoms unless the psychical equilibrium of the individual is disturbed. The various conditions which tend to deviate pregnancy and labor from the normal are the factors which are needed to disturb the balance and arouse the latent forces, which then become manifest and produce the group of symptoms termed eclampsia. This explains why eclampsia is mostly found in primiparæ, and why hydramnion, multiple pregnancy, pelvic contraction, and abnormal presentations are so abnormally frequent —in other words, in cases in which labor is slow and painful eclampsia is most easily produced.

John O. Polak holds that eclampsia is due to a toxemia in which the entire excretory system plays a part; that constipation bears an intimate relation to this toxemia; that a pregnancy nephritis is frequently coincident with the occurrence of convulsions, and that an albuminuria is of much less importance than a diminution in urea and total solids eliminated, or a decrease in the amount of water passed in twenty-four hours; and, finally, that while diaphoretic, cathartic, and dietetic measures often improve a nephritis of pregnancy, the woman is never safe with the fetus *in utero*. Therefore the gestation should be terminated in the most surgical manner. Veratrum viride in small doses is useful as a prophylactic when the pulse is full, hard, and rapid, as is often the condition preceding eclampsia. After delivery the activity of the skin may be preserved by hot baths, veratrum continued in five-drop doses for its diaphoretic and diuretic effect, and active catharsis established with elaterium or croton oil. The ordinary diuretics, as the potassium salts, digitalis, diuretin, etc., are practically worthless to increase the amount of water passed in such an emergency, and do harm by stimulating the renal cells or by increasing the blood pressure in the diseased organ. The forced ingestion of pure water—employing a normal salt solution of 100° F., which is thrown into the colon through a fountain syringe at slight elevation, the patient lying on the left side with the hips slightly elevated—will rapidly increase the urinary secretion. These injections of sterilized water may also be made directly into the circulation, as suggested by Dawbarn in acute anemia.

Veratrum viride in eclampsia.—C. C. Barrows lays stress on the use of veratrum viride in eclampsia, believing that although generally appreciated in the Southern States it is in danger of being forgotten elsewhere. After its administration the urinary secretion becomes copious and the patient immediately improves. J. C. Edgar does not believe that any other drug, except possibly chloroform, is as valuable as veratrum viride in eclampsia, the latter being almost as prompt in its action upon the skin as upon the heart and kidneys, and, in his opinion, better to employ than the hot-air bath. W. J. Chandler believes in the free use of veratrum viride by mouth, as the stomach will reject an overdose, but warns against its use hypodermatically.

R. C. Newton endorses the use of veratrum viride in eclampsia and considers that there is no use in emptying the uterus. This procedure adds infinitely to the woman's danger and does not strike at the root of the evil. It is bad practice to increase the strain upon the vital powers. While it is true that, as the strain of labor brings on convulsions, its conclusion will remove the exciting cause, its acceleration adds to the risk; whereas retardation of labor gives the economy more time aided by proper remedies, to prepare for delivery.—*Jour. of Ob.*

Heart Disease and Pregnancy.—The usual effect of pregnancy upon the heart is to cause eccentric hypertrophy. This is the effect under normal conditions. When, before the onset of pregnancy, the heart is already crippled by a lesion of the valves or by a weak muscularity, the tendency is for dilatation to predominate over hypertrophy. This tendency is influenced to a much greater degree by the quality of the heart muscle than by the valve lesion. Herman B. Allyn states that undoubtedly the most constant effect of pregnancy is to aggravate a pre-existing endocarditis. The risk is so grave that it may well make a woman with heart disease, and particularly mitral stenosis, hesitate before marrying. The outlook in aortic insufficiency is also bad. The possibility of fresh attacks of endocarditis must not be forgotten; these are more apt to occur in younger patients and in those presenting comparatively recent lesions. There is great risk in marrying soon after the subsidence of an endocarditis and before full compensation has been restored. There is very high mortality among the offspring of cardiopaths. It is well to remember this when we feel compelled to advise strongly against marriage, as the patient may be more willing to listen to advice if we urge the very bad prospect of her having living healthy children. As regards treatment, this does not in the main differ from the treatment of heart disease under other conditions.

Cystic Degeneration of the Mammæ.—Herbert Snow, well known as an authority on diseases of the breast, in reporting three cases of "recurrence" where one breast had been removed for cystic degeneration, says: After the age of 34, cyst formation is, in my experience, invariably due to a general aberration in the devolution of the entire parenchyma, not merely of one, but, as the following cases show, of both mammæ. There may be found but a single cyst of appreciable size; with this, however, are always associated numerous others, possibly hardly larger than a pin's head, uniformly distributed throughout the gland tissue. If not operatively interfered with the condition may continue until the entire mamma becomes a congeries of cysts, within which, sooner or later, "intracystic vegetations," carcinomatous or sarcomatous, develop. It is brought about, like cancer, by any emotional or mechanical hindrance to the natural processes whereby the mammæ pass to their obsolete phase. When there is redundant formation of white fibrous tissue between the cysts, the tumor is spoken of as a "cystic fibroma"; but there is no essential difference between this and the simpler cystic degeneration. It is best, when operating, to carefully remove the whole breast tissue, and if questioned, as commonly happens, about possible "recurrence," to give a guarded prognosis so far as concerns the remaining organ. The point that we have here to deal with, a general and not merely a local lesion of the parenchyma, is hardly, I think sufficiently appreciated by the profession at large, but unless attended to may involve the practitioner in some disrepute.—*Lancet.*

The Prophylactic Treatment of Vesico-vaginal Fistula.—Schultze (*Central. fur Gynäk.*) calls attention to the fact that cervico-vesico-vaginal fistulæ tend to heal spontaneously, and that they are more frequent after labor than is generally supposed. On the contrary, minute vesico-vaginal fistulæ often require operative treatment.

Prolonged pressure of the head in delayed first stage after premature escape of the liquor amnii, especially in cases of contracted pelvis, is more apt to be the cause of cervico-vesical fistulæ than is instrumental delivery, although the laity are prone to attribute it to the latter. The unwise use of ergot is another prominent etiological factor. After all difficult labors, in which the bladder has been subjected to prolonged pressure, the urine should be drawn regularly every eight hours for a few days. By adopting this simple procedure a considerable proportion of the cases of vesico-vaginal fistulæ can be prevented.—*Amer. Jour. Med. Sci.*

Vaginal Hysterectomy with Clamps.—Landau (*Central. fur Gynäk.*) reports 277 cases of hysterectomy in which clamps were employed, 112 for malignant disease with eight deaths, 54 for fibro-myomata with two deaths, and 109 for disease of the adnexa with a single fatal case. With the exception of one woman, who suffered from a fistula, the patients were entirely cured. The bladder was injured once, the ureter once, and the intestine five times.

The writer insists upon the necessity of thorough work. All diseased tissues should be removed; at the same time a conservative course should be followed wherever this is possible. He approves strongly of Dührssen's exploratory incision through the anterior vaginal fornix.—*Amer. Jour. Med. Sci.*

Adhesion of the Appendix to the Pelvic Organs.—Chognon (*Central. fur Gynak.*) has collected statistics showing the frequency with which the appendix vermiformis is adherent to the pelvic organs. In twelve cases it was adherent to diseased adnexa, in twenty to ovarian tumors, once to an ectopic sac. The practical deduction is to examine the appendix in every cœliotomy in which adhesions are separated, and if it is adherent and sustains even the slightest injury during the separation, to extirpate it in every instance.—*Amer. Jour. Med. Sci.*

NERVOUS DISEASES AND ELECTRO-THERAPEUTICS

IN CHARGE OF

CAMPBELL MEYERS, M.D., C.M., M.R.C.S. Eng., L.R.C.P. Lond.

192 Simcoe Street.

A CONTRIBUTION TO THE STUDY OF THE SYMPTOMS OF HYSTERIA, SIMULATING VARIOUS VISCERAL AFFECTIONS.

BY DRS. MASSALONGO AND FARANATI.

In a hysterical woman thirty-six years of age, Drs. Massalongo and Faranati, had occasion to notice some very curious symptoms, which simulated round ulcer of the stomach and pulmonary phthisis. The patient at first presented a perfect clinical picture of simple gastric ulcer, characterized by attacks of violent gastralgia, with vomiting, sometimes of food, sometimes of blood or even composed of pure blood and accompanied at times by an intense fever and abundant perspiration. the abdomen was enlarged, the stomach dilated and the slightest pressure on the epigastrium induced intense pain. All the means usually employed in the treatment of round ulcer of the stomach (nitrate of silver, an appropriate regimen, etc.) were tried in vain in this case. Morphia alone calmed the attacks of gastralgia, subsequent observation having shown that in spite of the persistance of the symptoms of ulcer of the stomach, the general condition and the weight of the patient's body were not sensibly changed, the conclusion was reached that the affection was of nervous origin. This conclusion was further confirmed when it was found that by means of suggestion exercised when in a state of wakefulness (in administering, for example, an indifferent medicine which the patient was assured, was very active) the pain vomiting and hæmatemisis was immediately removed. The conclusion became a certainty when one day the gastric troubles suddenly ceased and all the symptoms which are characteristic of pulmonary tuberculosis appeared in their stead : cough, sometimes dry and sometimes accompanied by muco-purulent expectoration, hæmophtysis, thoracic pain; remittent or intermittent fever, nocturnal sweats, anorexia, diminution of thoracic resonance, and of the respiratory murmur at the apices, subcrepitant râles and jerky respiration. All these symptoms were equally influenced by suggestion and in spite of their persistance they did not exercise any action whatever on the patient's general condition. It was necessary, therefore, to consider them of an hysterical nature ; in fact the microscopical examination showed in this case the complete absence of elastic fibres and of the bacillus of Koch in the expectoration.

Another patient of Drs. Massalongo and Faranati, forty years of age, whose family was decidedly hysterical, presented attacks precisely like those of hepatic colic. They consisted of an acute pain in the epigastrium radiating to the right hypochondrium and accompanied by vomiting. These attacks usually followed some vexation and were at times accompanied by a very manifest icterus of short duration as well as by hystero-epileptic convulsions; they could be removed by hypnotic suggestion; this case was then one of pseudo hepatic colic with emotional icterus of hysterical origin.

Finally these authors observed in a young girl of sixteen, the symptoms of acute hysterical peritonitis. This patient experienced abdominal pain, which was augmented by the slightest pressure. The abdomen was distended, the pulse filiform, the skin extremely pale and the facies clearly peritonitic. An intense fever was present and percussion showed, in the lower part of the abdomen, a manifest dulness indicating a peritoneal exudadation. In short, the condition of this young girl was so grave that an approaching dissolution might be expected, when one day, in consequence of a severe scolding which it was necessary to give her, all these morbid and so unquieting phenomena suddenly disappeared.

From these observations Drs. Massolongo and Faranati conclude that besides the local or peripheral manifestations of hysteria already well-known, there exist some hysterical manifestations implicating the viscera, which may simulate among others, round ulcer of the stomach, pulmonary phthisis, hepatic colic and acute peritonitis. The differential diagnosis of these various

forms of visceral hysteria, the acquaintance of which is in the highest degree interesting to the general practitioner, is often most embarrasing. The effect of suggestion either in the state of wakefulness or during hypnotic sleep, as well as an intense emotion may at times singularly facilitate it.—(Translated from *La Semaine Médicale* by CAMPBELL MEYERS, M.D.

THE RATIONAL THERAPEUTICS OF INFANTILE CONVULSIONS.

BY WM. A. DICKEY, A.M., M.D.

In studying the convulsive seizure of children it must be understood that it is not a disease, but merely a symptom ; that it occurs at a time of rapid development both of the nervous and muscular system ; that both are unstable and easily disturbed, either by irritants or by the thermic center being thrown out of balance through the influence of toxic agents generated within the alimentary canal, or taken into the body by means of the respiratory system, or otherwise. . . .

The first and most important element in the treatment is to remove the cause as far as possible. Unfortunately, this cannot always be done. Dr. J. Lewis Smith, who has done so much for American medicine, says in his work on "Diseases of Children" : "Inasmuch as the physician is often required to treat eclampsia in ignorance of the cause, the same measures are demanded, to a considerable extent, in all cases. As early as possible in the attack the feet should be placed in hot water, to which mustard is added, or if it can be procured with little delay' a general warm bath may be used in place." Osler, in his classical work on "Practice," approves of this procedure by saying : "The practice is almost universal of putting the child into a warm bath, and if there is fever the head may be douched with cold water.". .

Some years ago I was summoned hurriedly to a child in spasms. Arriving at the home I found the mother watching in agony the writhing of her first-born, a boy of six summers, in convulsions, The eclamptic seizure had about spent its force when I reached his bedside. I placed a thermometer in the axilla, and then began an investigation of the case. The family history was negative except as to the mother, who proved to be nervous and irritable. On the night preceding the attack the patient had been restless, tossing from side to side with fever, which gradually increased until the explosion took place. I examined the body to see if any eruption could be found. None was visible. He had had scarlet fever. Pneumonia did not exist. Inquiry as to diet elicited the fact that on the day previous a large amount of food had been taken other than that usnally consumed. The thermometer was now examined and found to register 104°. The thought occurred to me that it was hardly logical to put a body with this temperature into water that would register 115°. I did the opposite. I called for the two bowls of water, one to contain cold water and the other lukewarm. The entire body and limbs the mother sponged with the tepid water, following this by brisk friction, while I applied the cold water to the face and head, hands and forearms. The lukewarm water now had cold water added to it until it too was cold, when the body was again sponged. This was repeated, followed each time by friction. In twenty-five or thirty minutes the temperature was nearing the normal, and the bath was suspended. An enema was ordered, and in addition three grains of bromide of soda, with two drops of tincture of gelsemium, was to be given every two hours (except when the child was asleep) until my return the following day. In addition to this, one-fifth grain of mild chloride of mercury, with one grain of subnitrate of bismuth, was to be taken hourly until the bowels moved freely. On the following morning I found the little fellow free from fever and feeling splendidly, having slept well during a greater portion of the night. The interval between doses of the soda and gelsemium was lengthened to three hours, and continued through the day. He was to be kept in bed and free from all annoyance. . . . .

Other remedies than these I have indicated can be used during the paroxysm. The inhalation of choloroform can be practised, but it should never be intrusted to the hands of those ignorant of its effects. Chloral, by the mouth or rectum, will be beneficial. It may also be combined with bromide of soda. Morphine, hypodermically, in one-thirtieth grain doses, to a child one or two years of age, may be given safely, and repeated in an hour or two if necessary. There are cases in which some one of the coal-tar series will be of unquestioned value, but they, too, must be given with circumspection, and not at all after the fever has subsided, on account of their very great depressing effects.

It is the duty of the physician, then, in my opinion, when called to the cases, *to first use a thermometer (of tried exactness), no matter how urgent the symptoms.* While he is waiting for the instrument to register, a history of his patient can be gleaned. Some knowledge of its ancestry should be elicited. Is it inclined to rickets ? Has it now or has it had scarlet fever, measles, whooping cough, or pneumonia ? With this survey of the case he is ready to read his thermometer, and if it indicates a temperature of 103° or more, and the extremities not cool, I do not hesitate to say, if you will pardon the apparent dogmatism, that a hot bath is not indicated. I believe it does more harm than good.

With the boldness that comes from confidence and experience, the sponge bath in the manner indicated is discarded, and the child is stripped nude and the entire body wrapped in a sheet previously wrung from cold water. Injection of cold water into the rectum has been practiced, and I am sure if the bowels could be well filled and the water retained for some time it would prove beneficial.

Under the influence of cold bath, not only is bodily heat dissipated, but inspiration, which is short and shallow, becomes much longer and deeper. As a result, more oxygen is taken into the blood and the carbolic acid in excess is liberated. The blood becomes purer and the brain cells and nerve centres are in consequence supplied with a more healthy pabulum, and thus enabled to perform their function in a normal manner. The heart, which has been rapid and irregular, and many times very weak, is given tonus, and forces the healthy blood in even currents to all parts of the body. The kidneys secrete an increased amount of urine, and from all avenues of the organism ptomaines, which had been circulating through brain, nerve and muscle, and are an important element in producing the eclampsia, are in this way liberated and gotten rid of.

I am aware that, even in a progressive age like the present, methods of procedure, sanctioned by high authority and hoary with years, are not easily changed. More particularly is this true of those affections with which we seem to be familiar by frequent contact. It is well, however, for us at times to cast about us, take new bearings as it were and see if from this vantage ground some step forward cannot be taken. This, I am sure, will be true in convulsions of infants if the plan of treatment outlined in this paper is followed.—*Col. Med. Jour.*

Examples of Falsehoods or Apparent Falsehoods in Cases of Hysteria.—Dr. Vibert has reported two interesting examples of what he terms "pathological" falsehoods. The fabrications of hysterical patients are generally not falsehoods, as these persons are not conscious of the falseness of their statements, and as these latter are based upon real deceptions of memory. The first case, a servant girl, 28 years old, is found gagged on the floor, on her mistress' return to the house. She claimed that a burglar had entered the house and maltreated her in this way. The circumstances rather indicated that the assault in question was a feigned one. Nothing was stolen. The cause of this comedy was not ascertainable. The girl had been hysterical for a number of years, and had for some days been subject to feelings of oppression and marked persecutory ideas. On the day of the feigned assault she was apparently in an abnormal mental state, probably somnambulism. As soon as she became lucid, after a few hours, she recognized at once the autosuggestive deception, to which she had been subject. The second case was that of a man, 30 years of age, who had presented symptoms of hysteria virilis. He was a person of very lively imagination; had heard of the railroad accident at St. Maudé, claimed to have been present and to have suffered severe injury. He sent in a claim for damages which was rejected. In 1892 he appeared at a police station quite exhausted, vomiting blood, accusing a certain coachman of having wilfully driven over him. He was taken to the hospital, and on account of the presence of abdominal symptoms, a laparotomy was performed, but no internal injury was discovered. The investigation of the affair did not develop any satisfactory case against the coachman, but on the contrary made it probable that the whole story was invented by the accuser; *i. e.*, that it was a case of autosuggestion. It appeared that the latter had no intention of hurting anyone by the accusation, as he was so convinced of the reality of the injury as to permit the performance of a laparotomy.—*Annales d'Hygiene Publique.*

Operation in General Suppurative Peritonitis.—The principal reason why surgeons have not succeeded in saving life oftener by operation in these cases is, in the opinion of Miles F. Porter, because the operations have been done too late. He has operated in three cases—two *in extremis*, both of which died, and in one five days after an attempted abortion. As soon as the peritoneum was incised there escaped a large quantity of turbid, stinking serum, followed later by pus of the consistence of cream. There were no adhesions, the pus being free in the peritoneal cavity. This was thoroughly flushed with hot salt solution and drained with a glass tube. The second day threatening symptoms necessitated a second flushing. Patient recovered.—*Int. Jour. Surg.*

Surgical Shock as a Cause of Death in Women.—Charles P. Noble hits the nail squarely on the head when he says: "Deaths from shock in women after abdominal and pelvic operations, as a broad statement, are so many unnecessary deaths, and represent deaths from hæmorrhage or from greatly prolonged operations. Of course the exceptions are the operated upon *in extremis*, and these operations are seldom attempted except by the more courageous of well-trained gynæcologists. —*Med. News.*

Sanmetto.—I have been using Sanmetto for several years, and find it invaluable in nearly all kidney and bladder troubles, especially those accompanied by irritation or inflammation of the mucous membranes, as well as in sexual decay and pre-senility.—Wm. F. Mitchell M D., Addison, Pa.

PATHOLOGY AND BACTERIOLOGY

IN CHARGE OF

H. B. ANDERSON, M. D., C. M.,

Pathologist to Toronto General Hospital; Professor of Pathology Trinity Medical College, and in charge of the Trinity Microscopic Pathological Laboratory, Toronto General Hospital.
233 Wellesley Street.

VASOMOTOR ŒDEMA WITHOUT ALBUMINURIA.

Tchirkaff, in an interesting article, calls attention to a new syndrome, characterized by great œdema without appreciable organic disease. He has studied six cases between 1886 and 1894. The patients were all men of from twenty-five to sixty years of age, generally of a good constituition, though some of them slightly anæmic.

In the cases presenting anæmia the œdema developed slowly over a period of three to four months; in the plethoric subjects it developed much more rapidly.

The anæmic cases strongly resembled the picture presented by cases of chronic nephritis. In the non-anæmic cases there was a different picture, anasarca coming on rapidly in the space of a week or so, the peritoneal cavity filling with fluid, and in the course of the next two weeks the pleural and pericardial cavities also showing signs of exudate. The face, trunk, and extremities all became swelled at the same time.

At times only the upper extremities were œdematous, but usually the lower were most affected. In some cases the œdema affected mostly the neck, face, chest, and upper arms. Certain patients lost the hair from the eyebrows, beard, moustache, and pubes at the time that the œdema appeared; the hair of the head also became very thin and of a softer texture, and changed its color somewhat. The cases all ended in recovery.

Most careful examinations showed that there was no nephritis in these cases; the urine was repeatedly examined, and albumin was never present, showing that they were not cases of chronic nephritis with temporary absence of albumin; there were never, moreover, any signs of uræmia or kindred symptoms.

The blood was carefully examined in all cases, and no changes were found either in the number of corpuscles or the percentage of hæmoglobin; a large percentage of reduced hæmoglobin was, however, always present.

The heart was negative in all the cases, and there were no frank signs of hepatic cirrhosis.

The majority of the patients either showed signs of or gave a history of a preceding lues.

From the increase in the reduced hæmoglobin, and the fact that there were no signs of deficient oxygenation in the lungs, or venous stasis, Tchirkaff concludes that we must be dealing with a stasis in the venules and capillaries probably of vasomotor origin.

As the result of his observations he formulates the following conclusions:

1. There exists a form of disease but little known, characterized by general œdema, with effusion into the serous cavities, without albuminuria; at the same time the heart, lungs, liver, and other organs show no change capable of causing œdema from blood stasis.

2. These œdemas are of a vasomotor origin and can be called "general vasomotor œdemas."

3. They are characterized by, and often accompanied by, dilatation of the right heart and moderate artero-sclerosis.

4. They are always accompanied by changes in the blood, *i. e.*, the hæmoglobin is reduced in excess. Beyond this one occasionally sees trophic trouble and pronounced paralysis of the veins of the skin.

5. In most cases these œdemas are of syphilitic origin, and disappear under treatment by mercury and the iodides. It is possible that the œdema without albuminuria, from which the African soldiers suffer, does not always occur from cold or the formation of ptomaines from indigestion.—*Revue de Médecine; Am. Jour. Med. Sci.*

THE THERAPEUTIC VALUE OF TOXINS IN MALIGNANT TUMORS.—Dr. W. B. Coley, of New York, gave his experience with toxins, mostly mixed toxins of erysipelas and bacillus prodigiosus, in the treatment of malignant tumors. The number of patients so treated exceeded one hundred. The greatest benefit had been in sarcoma. He said that he did not propose to discuss the theories on which the treatment of cancer by toxins is based, but he would give the results of his practice in that direction during over four years, which he had spent in the application of the treatment at the New York Cancer Hospital. I do not say that all cases of cancer can be cured by the toxin treatment. I can only give to the profession the results which have been reached by the use of the erysipelas serum and other toxins. I have had

good results in many cases of both sarcoma and carcinoma. In some cases the patients have been greatly benefited by the treatment, and their lives have been certainly prolonged; if an entire cure has not been achieved. In the most successful cases the malignant growths have been entirely abated, no symptoms of their presence can he detected by the most rigorous examination, and the patients are in apparently perfect health. There has been no recurrence of the cancerous growth since the cessation of the treatment, although the time from the cessation of the treatment in the different cases ranges from seven months to three years. The reason that other practitioners have not been as successful and have not achieved such good results as I am able to report, can probably be traced to the fact either that the treatment has been slip-shod or has not been sufficiently persisted in. All the cases which I have treated successfully have been pronounced inoperable by the best authorities in this and other cities, owing to the position of the malignant growths or other conditions. Several of the patients had been operated on previously, and came under my care at the hospital on a recurrence of the cancer. In cases where the toxin treatment was succeseful, the patients are now going about apparently in perfect health.

Dr. Coley then enumerated eight cases which had been treated by him with success. He detailed at length the condition of the patients when they came into his hands, the exact nature of the malignant growth from which they suffered, and the course of treatment pursued in each case. Six of Dr. Coley's patients who had been successfully treated—four women and two men—visited the hall, and the doctors subjected them to a rigorous inspection.—*Med. Rec.*

THE ANATOMY OF CARCINOMA UTERI.—Veit (*Central. fur Gyn.*) makes some important practical suggestions growing out of his more recent anatomical studies of this subject. He does not think that sufficient attention has been paid to the different varieties of cancer in the giving of a prognosis as regards recurrence after hysterectomy, nor is he inclined to agree with Winter in his statement that a considerable proportion of such recurrences are due to the infection of healthy raw surfaces during the operations. He divides cases of carcinoma of the cervix clinically into those in which the disease is situated in the portio or in the cervical canal, and in which it appears in a nodular form in the cervix, or, as disease of the corporeal endometrium. Primary nodules in the cervix originate in the connective-tissue, and are now regarded as endothelioma. As regards extension of the disease, the writer has often found cancer-cells in the lymphatics of the broad ligaments; when these infected vessels are divided during operation it is natural to infer that they form foci, from which a rapid recurrence takes place. The latter form of recurrence is characterized by the fact that the metastatic deposits present the same histological structure as the primary disease, and that they rapidly invade the deeper tissues. The simultaneous appearance of two apparently independent primary cancerous nodules can usually be explained by referring the more deeply-seated one to secondary infection.—*Am. Jour. Med. Sci.*

EFFECT OF INFLUENZA ON THE FEMALE SEXUAL ORGANS.—Müller (*Munch. med. Woch.*) noted the condition of the pelvic organs in 157 cases of influenza, 21 women being pregnant. Of the latter 17 aborted. Of the non-gravid women all but three showed symptoms of uterine disturbance, either hæmorrhage or aggravation of previous troubles. Hæmorrhagic endometritis commonly developed, as in cholera, typhus, and other infectious diseases. After the decline of the disease the uterus was frequently found to be enlarged, and evidences of chronic endometritis were present. which seemed to be directly due to the influenza, —*Am. Jour. Med. Sci.*

A CASE OF TRISMUS AND TETANUS NEONATORUM.—Baginsky (*Berlin. klin. Woch.*) records a case under this title in a strong, well-nourished female infant nine days old, who had been ill for twenty-four hours. The case was submitted to antitoxin treatment according to the method of Behring and Kitasato, six injections being given over a period of four days. Death occurred upon the fifth day of the disease. Cultures of serum from the navel made on the second day of the disease showed the tetanus bacillus, and produced in a mouse typical tetanus and rapid death.—*Am. Jour. Med. Sci.*

PUERPERAL TETANUS TREATED BY TIZZONI'S ANTITOXIN.—In the *Deut. med. Woch.*, Walko describes a case of puerperal tetanus treated by antitoxin in von Jaksch's clinic at Prague. The treatment was unsuccessful, the patient receiving in all 18 injections, comprising $3\frac{6}{10}$ grammes. Well-marked leukocytosis developed after the second injection. As has been shown by Kittasato, tetanus bacilli could not be recognized. The clinical picture, however, of tetanus was a perfect one.—*Am. Jour. Med. Sci.*

THE DISINFECTION OF THE HANDS.—Reinicke contributes an article upon this subject to the *Archiv. fur Gyn.* He concludes from an elaborate series of experiments that the hands should first be cleansed with hot water and soap, and brushed for five minutes; then brushed from three to five minutes in 90 per cent. alcohol, and afterward in an aseptic fluid. The quickest method of disinfecting the hands consists in brushing them vigorously in alcohol for five minutes.—*Am. Jour. Med. Sci.*

NOSE AND THROAT

IN CHARGE OF

J. MURRAY McFARLANE, M. D.,
Laryngologist to St. Michael's Hospital. 32 Carlton St.

DIGITAL EXAMINATION IN THE DIAGNOSIS AND TREATMENT OF DISEASES OF THROAT AND NOSE.

Dr. S. Kohn, in a paper on this subject, spoke of the importance of a diagnosis in the practice of medicine. Clinically, palpation and digital examination had been considered of the highest importance in physical diagnosis. While inspection ranked first, palpation was a close second, since it revealed characteristics which the eye could not see. The author thought the general practitioner had neglected digital examination in diseases of the throat and nose, and he wished to emphasize its importance. He advised supplementing instrumental examination by a careful palpation of the parts, after thoroughly disinfecting the hand, introducing the index finger to the posterior pharyngeal wall, cautiously palpating the tonsils and perhaps the nasopharyngeal space and upper larynx, and feeling certain changes which the eye could not see. The change visible to the eye was a change in conformation, such as that of enlarged tonsils and that of tuberculous swelling of the epiglottis or of the arytenoid cartilages, while the index finger could feel whether the tonsil was made up of dense organized connective tissue or of soft granulation tissue, and this would enlighten one as to the method of abcission to be followed, whether with guillotine or with the snare, as is in the hard connective-tissue tonsil the danger from hæmorrhage following the operation with the amygdalotome was greater than that following the use of the cold snare or the cautery loop. Again, the eye detected a swelling running along the border of the posterior faucial pillar; the index finger would feel that this swelling was hard and unyielding, pointing to the diagnosis of possible incipient malignant disease; and implication of the submaxillary lymphatics, discoverable by palpation, made the diagnosis a certainty. While a tense, glazed, protuberant swelling seen upon the posterior pharyngeal wall of a child led to the supposition of retropharyngeal abscess, the detection of *fluctuation* by the index finger left no room for doubt as to the diagnosis. While cleanliness was the first requisite to a proper digital examination of the throat, the second was gentleness of manipulation, and the third a thorough knowledge of the normal topography and feel of the parts. He spoke of its use in adenoid vegetal tions, where often a rhinoscope examination was impossible. If the mass was soft, pulpy, and easily crushed, it could perhaps be removed by crushing and scraping with the nail at the time of examination. If the child was enveloped in a strong band of toweling, imprisoning both upper extremities, and held sitting upright upon the lap of a nurse, the entire operation could be completed in a few moments without narcosis, with or without instruments. Digital examination was invaluable in detecting malignant disease of the throat, as careful palpation with the index finger would reveal induration, raising the question of malignancy, which would be settled by a microscopic examination. In follicular amygdalitis it was of great value. Foreign bodies were often felt by the finger when they could not be seen by the eye. In diseases of the nose the tactile sense had not such a wide field of application. The author spoke of a case of rhinolith which the index finger had succeeded in dislodging after all instruments had failed. In the Asch operation for deflection of the nasal sæptum the index finger had succeeded in dislodging after all instruments had failed, being introduced into the nostril on the the fractured septum over to the other side, after side of the convexity of the septum, and puhing which the splints were introduced.—*N. Y. Med. Jour.*

Foreign Bodies in the Œsophagus.—Dr. H. M. Silver, of New York County, read a paper on this subject and reported several cases. He objected very strongly to the old sponge probang as an instrument that could be of little use or furnish much information regarding a foreign body in the œsophagus. The best instrument for such exploration, he said, was a *bougie à boule* provided with several sizes of bulbs and with a metal stem having graduations by which the operator could tell the exact distance of the body from the upper incisor teeth. It was dangerous, he said, to attempt to extract or push down small angular bodies with jagged edges. If a solid body of irregular shape was swallowed, it should be promptly removed by incision, as experience had shown that the prognosis depended more upon the length of time an object was impacted than upon its size.

Dr. George Fischer had shown that out of twenty-eight deaths, eighteen had been caused by conditions which had been preventable. It should be remembered in exploring the œsophagus that there were two natural constrictions—viz,. one at the cricoid cartilage, or seven inches and a half from the teeth; the other, at the cardiac orifice, or fourteen inches and a half from the teeth. Where the object to be reached was distant thirteen inches or more from the teeth, gastrotomy was the proper operation; if less than thirteen inches, œsophagotomy. Suturing the œsophageal wound was not essential, and if the foreign body had been long impacted, or if the œsophageal wall was infiltrated, ulcerated, or gangrenous, it should be left open. Ordinarily one or two sutures might be passed through the upper part of the external wound and the remainder carefully packed with iodoform gauze. The external wound should never be completely closed. Absolutely no food should be given for the first twenty-four hours after the operation, but if the patient suffered much from thirst this might be relieved by enemata of water. The author did not approve of rectal alimentation, considering it neither efficient nor necessary. The passage of a feeding tube into the œsophagus was both unsurgical and dangerous. After the first twenty-four hours liquid food might be given by the mouth, and its escape through the wound could be for the most part prevented by the application of a cotton compress during the act of deglutition. The operation of œsophagotomy, the author said, was now much more frequently resorted to than formerly, with the result of saving many lives. The mortality in a hundred and sixty-five collected cases of œsophagotomy was twenty-three per cent.—*N. Y. Med. Jour.*

The Herpetic Form of Diphtheritic Angina.—At a recent meeting of the *Académie de médecine*, a report of which is published in the *Press médicale*, M. Dieulafoy related the histories of five cases, the first of which came under the observation of M. Kelsch, who found the diphtheritic bacillus in a case of angina presenting all the characteristics of a common herpetic angina. The second case was one of M. Huchard's; it broke out very suddenly with intense symptoms, and was accompanied by herpes of the pharynx and of the lips. M. Huchard made a diagnosis of herpetic angina, which was confirmed by M. Brocq. At the end of a few days the child died from the disease, which proved to be malignant diphtheria.

M. Roche related the case of a young woman who suffered with an acute angina accompanied by a confluent eruption of herpetic vesicles, the diphtheritic nature of which was proved on the following day. The cultures contained diphtheritic bacilli associated with streptococci. The angina was followed by a scarlatinous eruption, which developed like that of classical scarlatina. This, said, M. Dieulafoy, was rather a curious case, as it was well known how rare diphtheritic angina was at the onset of scarlatina. M. Martin had observed two cases, the first in a child five years of age, who presented an angina with herpetic vesicles; on the tonsils there was a false membrane, which proved to be of a diphtheritic nature. The second case was that of a child, six yesrs old, who presented an acute angina with a temperature of 104° F. The tonsils were enlarged and covered with a light pultaceous layer, and the lips showed a group of herpetic vesicles which contained long diphtheritic bacilli.

There seemed therefore, said M. Dieulafoy, no doubt in regard to this question, and he thought that in the future we must consider it an assured fact that a number of the so-called herpetic anginas were diphtheritic in their nature.—*N. Y. Med. Jour.*

THERAPEUTIC NOTES.

TREATMENT OF ACUTE CORYZA.

One of the most successful treatments of acute cold in the head is to begin with:

℞—Pot. bicarb., ... gr. xx.
Sodæ salycilas, ... gr xv.
Aq. menth. pip, ... āā ℥ js.—M.
Sig.—This to be taken three times daily.

℞—Pil antineuralgic (Brown-Sequard) ij.—
Sig.—Take one pill daily.

℞—Cocaine mur., ...
Menthol, ...
Camphor, ... āā gr. j.
Pulv. amyli., ... ℥ ij.—M.
Sig.—To be used as a snuff, three or four times a day.

ACUTE TONSILLITIS.

In acute tonsillitis of the follicular variety, the ammoniated tincture of guiaicum in teaspoonful doses given in a little milk every four hours acts almost as a specific.

TUBERCULAR LARYNGITIS.

In tubercular laryngitis Dr. Fletcher Ingalls, of Chicago, uses:

℞—Morph. sulph,. . . . . gr. iv.
Carbolic acid, } . . . . . gr. xx.
Tannic acid, }
Glycerine, ...
Aquæ, ... āā ℥iv.—M.
Sig.—Apply to larynx with brush.

Med. World.

THE CANADA LANCET

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* Dr. J. L. Davison, 12 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P. O. Orders to be made payable to* Dr. G. P. Sylvester, Business Manager, 585 Church St., Toronto.

AGENTS.—Dawson Bros., Montreal; J. & A. McMillan, St. John N.B.; Canadian Advertising Agency, 60 Watling St London. 5 Rue de la Bourse, Paris.

Editorial.

OUR NEW SERIES.

We present to our readers this month the initial number of our new series. We trust they may all be pleased with the change, as we hope it may be advantageous both to them and to us.

It will be noticed that we have increased the number of pages of reading matter from 32 to 40, double column. This style and shape of journal will be continued till the end of the present volume —August next—when further changes in the way of improvement in its appearance will be carried out, and an additional 16 pages added.

We have also, following the example of the best home and foreign journals, divided the reading matter into sections, each under the supervision of a medical man making a specialty of the respective subjects. Drs. J. Algernon Temple, N. A. Powell, Geo. A. Bingham, Campbell Meyers, H. B. Anderson, and J. Murray McFarlane, have come in with us, and we feel certain that with such a strong staff of associate editors, our readers will appreciate an improvement in the reading matter we give them. Dr. J. L. Davison has charge of the editorial department, and Dr. G. P. Sylvester is now business manager.

We hope our readers will send us reports of interesting and instructive cases, with photographs when possible. We will furnish a reasonable number of reprints to any author sending an accepted article; or, if preferred, a cash honorarium instead.

DOUBTFUL POINTS IN THE MANAGEMENT OF ABORTION.

In an interesting and instructive paper by Dr. Charles P. Noble, in *The Therapeutic Gazette*, the author holds that neither the discharge of blood, nor contractions of the uterus, nor both together, are signs that abortion is inevitable. He has seen, as most of us have,, these symptoms subside under appropriate treatment, and the case go on to full term, with a normal delivery.

He gives two cases, one reported by Scanzoni, in which a woman who was seized with profuse metrorrhagia in the third month of pregnancy discharged great numbers of clots; as all hopes of saving the ovum were abandoned, ergot was used in large doses, and tampons were placed in the vagina. After thirty-six hours, a sound was employed to explore the uterus; and finally, as the bleeding continued for three weeks, an intra-uterine injection of a weak solution of perchloride of iron was resorted to. Eight weeks later the patient quickened, and presented the distinctive evidences of a pregnancy advanced to the sixth month.

The other case came under his own observation. In this, pregnancy had continued in spite of systematic application of pure carbolic acid to the endometrium, continued over some weeks. When, however, there is dilatation of the cervix, and descent of the ovum, he considers abortion inevitable, and no attempt should be made to prevent the expulsion of the ovum, especially if the discharges are foul and the patient febrile.

Dr. Noble considers that abortion is complete when, as under the old classical definition, the uterus is emptied of all portions of placenta, membranes and clots.

The dangerous period is at about three months. Up to two months the question is not so important, as nature usually takes care of such abortioun without much aid from the doctor. Also, after the fourth month there is not much difficulty in determining whether the uterus has emptied itself.

He thinks that a patulous uterine canal and continuance of hæmorrhage are signs that the abortion is not complete. The general opinion now is, that in the treatment of abortion, when infection has occurred, curettement of the uterus

under full antiseptic precautions should be undertaken. The uterus should be irrigated with an antiseptic solution after curettement.

If, however, the infective process has extended to the tubes, or to the broad ligaments, with inflammatory conditions in the pelvis; or to general peritonitis, or to septicæmia, then too much importance should not be placed upon uterine irrigation. This does not influence for good the processes in the deeper portions of the uterus or those which have extended beyond it. He indeed holds that such cases are injured by any manipulation such as would be necessary to irrigate the uterus.

His experience is that irrigations are not necessary for more than one or two days, if the operation of cleaning out the uterus has been properly performed at the outset, and that douching after two days is a source of harm rather than of good.

As to operative proceedings after septic abortions, the author holds, that after all proper proceedings, such as currettement, douching, and a pencil of 50 grams of iodoform introduced into the uterus, and subsequent douching have been performed, and the inflammation still spreads, that while the disease is localized either in the tubes, pelvis or broad ligaments, no operative measures are called for. Proper diet, mild purgation, ice or very hot applications to the hypogastrium, the exhibition of quinine and strychnia, etc., should be applicable to all such cases.

But if evidence of pus formation show, or if general peritonitis supervene, or a condition of septicæmia come on, *operation is indicated.* Up to the present time, abdominal section, removal of diseased structures, irrigation and drainage has been the accepted plan of treatment. At the present, many hold that vaginal hysterectomy is the proper method to pursure.

If general septicæmia exists, and the case is going on from bad to worse, Dr. Noble holds that operation, either abdominal or vaginal, is eminently proper, and promises to save the lives of many who, under the expectant plan of treatment, would die.

The objection, that many women would be unwarrantably subjected to hysterectomy, is not in his opinion valid, inasmuch as the patients are so ill that no surgeon would desire to operate upon them, except under the conviction that by doing so the patient's chances for life would be increased. Such cases are those in which the women have been violently ill from the beginning, and who either improve or die within a week from the time the septic symptoms appear.

SEPTIC INFECTION, INTOXICATION AND PYÆMIA.

Now that antiseptic surgery attempts the cure of surgical diseases, and the performance of operations, in a manner calculated as far as possible to avoid the entrance into the circulation of any septic material, the diseases named above have a larger interest to the physician proper. As a matter of fact the *post-mortem* room shows few cases with the anatomical diagnosis of septicæmia —coming from the surgical wards of hospitals; by far the greater number are from the medical side.

There is we think rather vague conceptions in the minds of many professional men regarding the nature of the three diseases—the term *blood poisoning* perhaps covering any or all of them. No doubt mixed forms frequently occur, yet there is sufficient distinction between them to make it worth while for writers and speakers to be more careful as to their terminology.

Septic intoxication, or as it is sometimes named sapremia, is a non-infective disease, due to the absorption of a chemical poison, manufactured outside the body, or at least not in the living tissues of the body.

This chemical poison is a toxin produced generally, if not indeed always, by the life of pathogenic micro-organisms. It does not reproduce itself in the blood, and is therefore dependent for its symptoms and event upon the amount taken into the circulation. Its presence and effects may be comparable to the injection of a toxic alkaloid.

There is no secondary or metastatic inflammation, and is therefore not a pyæmia, but a septicæmia. Practically, it is useful to know that the amount of putrid serum or blood which would kill an adult by septic intoxication when taken into the circulation, is large, viz., one to two ounces; so that death from this form of blood poisoning will necessarily only occur when large cavities exist and are either undrained or imperfectly drained, as in serious compound fractures, abdominal sections, wounds of joints or pleuræ,

the post-partem uterus, etc. Billroth showed that granulating surfaces do not absorb the putrid poison, so that septic intoxication does not occur after granulation tissue is formed, so long as it remains healthy.

Septic infection on the other hand, differs from intoxication, in being intensely infective. No matter how small a portion of poison is introduced, it goes on reproducing itself in the blood or other tissues, so that this form of blood poisoning must be due to the entrance of specific fungi, and their subsequent multiplication in the body. These organisms produce their particular toxins in the blood, but as they are non-irritant, no metastatic inflammations arise, and this form of blood poisoning is also not a pyæmia, but a septicæmia.

These infective organisms are of different species, and are not necessarily, though often, prssent in putrid material. Therefore we often have absorption of putrid fluids without septic infection.

Practically, it is important to note that septic infection may occur from the smallest wound, even without evidence of the entrance of a poison. The smaller the wound, with symptoms of blood poisoning, ths greater the likelihood of the process being one of septic infection.

Pyæmia, or as it is now called, septico-pyæmia, differs from the two diseases just spoken of, in that in pyæmia we have not only a general disease characterized by rigors, fever, delirium, etc., but also secondary foci of inflammation resulting in metastatic abscesses.

It is now admitted that there are no specific organisms of suppuration. The streptococci and staphylococci are most commonly found associated with the condition of pyæmia, though others may produce it, as the M. lanceolatus, B. coli communis, gonococcus and others.

THE LATE KENNETH M. FENWICK, M.D.

By the death of Dr. Fenwick, Kingston has lost one of her leading medical lights. Another earnest worker has gone over to the majority. His death was caused by an accident while attending to his duties as surgeon to the General Hospital. A cut was made in his finger while operating upon a child for septic peritonitis. Septicæmia was the result, and death in about a week. Dr. Roddick, of Montreal, was in attendance during the last few hours, but the end came at 11 p.m. Jan. 21.

Dr. Fenwick was a comparatively young man, only 44 years of age. He was a native of Kingston, son of the Rev. K. N. Fenwick, late of the Congregational College, Montreal. Dr. K. Fenwick was well known as a brilliant surgeon, not only through Canada, but also in the United States. His contributions to serial medical literature were numerous. An article from his pen appeared in our October issue. Like so many other men of brilliant parts, he died all too young, but it must ever be a source of consolation to his numerous friends and admirers that he died with the harness on. We wish to join with the many who offer their condolence to his bereaved wife and family.

A Test in Pharmacal "Ethics."—Mr. E. A. Schubert, of Fostoria, Ohio, says, the *Western Druggist*, in the course of a paper on pharmacal ethics, relates this account of a practical test of the professional integrity and competency of retail druggists in a given section of his State—a section, by the way, probably the equal in professional intelligence and honesty of the average community in Ohio and other States. "I espoused the thought," remarks Mr. Schubert, "that it would be a capital idea to write a prescription of easy composition and analysis, to see how many druggists would fill it correctly. I will set to work immediately mailing to each of fifty physicians one of the prescriptions, at the same time asking him to write it as a prescription of his own, send some friend with it to his druggist to have it filled, a copy taken and returned to me with the compounded prescription. Out of the fifty requests sent out, I received thirty-seven answers. The prescription called for a three-ounce preparation, but placing them side by side I found twenty-one to be three-ounce preparations, seven were in size four ounces, while the rest ranged in size from five to eight ounces. It was to be an emulsion; nineteen were of that composition, the remainder were far from being true to name. In color, when correctly filled, it would be nearly white; of these twenty-two were true in color, while the remainder ranged from a steel gray to nearly all the

known hues. The principal active ingredient was the acetate of morphine; thirteen only contained this, the remainder principally contained the sulphate. *Out of the entire number returned, eleven were found to be filled correctly.* The remainder were base substitutions, either through ignorance or intention. Of the eleven that were correct, nine came from the hands of Ph. G,s, the remaining two were compounded by old and reliable druggists in the city. Of the twenty-six not properly filled we found five Ph. G's., the remainder were country druggists having very little experience in this line and located, with but few exceptions, in towns of 6,000 inhabitants and less." Can it be possible that this sort of recklessness and ignorance characterizes the profession in other intelligent communities?

Diet in Pregnancy.—Attention has recently been directed to the well-known fact that a large proportion of the difficulties and discomforts of pregnancy are really due to neglect of ordinary simple dietetic rules, Ed. *Med. Press.* And a distinguished German physician has pointed out that an excessive amount of albumen, or of fluids, in the diet of pregnant women may tend respectively to the excessive development of the fœtus or to an unusual amount of amniotic fluid. Useful rules, therefore, are that women in that condition who have contracted pelves, or who have previously suffered from difficult labors, should partake of meat only once a day, and that in small quantities, that green vegetables, salads, potatoes, bread and butter can be taken, but that eggs, peas and beans, which are so rich in albumen, should be avoided; that fluids should only be taken in moderate quantities, and cocoa in preference to tea or coffee; that wine, beer, and spirits should be forbidden, while fruit, raw or cooked, may be indulged in *ad libitum.* The consequence of such a diet, it is stated by those who have adopted it, is to produce a feeling of "well-being," and the sense of fulness and bearing down, and the tendency to constipation, from which many pregnant women suffer, is thereby prevented. This strict diet, it is found, while diminishing the size of the fœtus and the amount of amniotic fluid, does not in the slightest degree interfere with the perfect development of the former.

The Debate on a Posture in an Æsthesia.—Dr. James MacMunn says, *Br. Med. Jour.* In all cases of asystole, experience has led me to consider the orthodox mode of raising the trunk and legs a mistaken one, as adding embarrassment to the dilated heart by not only increasing thoracic blood pressure, but by allowing the abdominal viscera to roll against the diaphragm. Indeed in cases of impending syncope in other instances, even quiet walking about often relieves more than resting still or lying down does.

The indication, it seems to me, is to lower the head and thorax only, not the head alone, so as to avoid tracheal constriction. This can be done by means of an inclined plane, and by a table I have made myself.

I wonder why so-called "mixed narcosis" is not now used in nervous cases as a means of deadening reflexes—I allude to the hypodermic injection of morphine and atropine or the plethoric glass of brandy or two given before anæsthesia, which were once used?

There is a curious condition of irregularity met with, generally in the dog's heart, which I presume others have noticed likewise, which may have some interest in connection with these experiments.

Venesection in Chloroform Poisoning—Fred H. Spooner, M.D., in a letter to *The Lancet* says:—In reading the constantly recurring accounts of death from chloroform, I have never noticed that bleeding the patient has been tried. As a rule, in these reports there is no account of a *post-mortem* examination, but in some of those reported I have noticed that the left ventricle is stated to be empty and the right full.

Now, it strikes me if the engorgement of the right side could be relieved there would be a much greater chance of the patient's recovery. The bleeding might be supplemented by galvanism to stimulate the heart's action. No harm, at any rate, would be done by bleeding, as none of the usual remedies have any beneficial effect, the patient always dying if the pulse ceases before the respiration. I should recommend opening the jugular vein as more directly relieving the heart.

Many years ago, when I was house-surgeon at the Children's Hospital, Shadwell, I noticed that at the *post-mortem* examinations of children dying

from morbus cordis, the right side of the heart was engorged and the left empty, although just before death the child had been pale and not at all cyanotic. I determined to bleed in the next case of impending death in morbus cordis. A few nights later I was called to a child with morbus cordis—I forget the particular form—and found him pale, pulseless, and apparently *in extremis*. I opened the jugular vein, and with difficulty got the blood to flow, but after a very little blood had come the child roused up and seemed much relieved; by the next morning he was quite himself again.

How to Treat a Cough:—In an able article under the above heading in the *N. Y. Med. Jour.* Edwin Geer, M. D., Physician-in-Charge of the City Hospital Dispensary, writes:—"The object of this brief paper is not to try to teach my colleagues how to treat a cough, but simply to state how I do it, what good results I get, and to call their attention to those lighter affections of the throat and chest, the principal symptom of which is an annoying cough, for which alone we are often consulted. The patient may fear an approaching pneumonia, or be anxious because of a bad family history, or the cough may cause loss of sleep and detention from business. What shall we do for these coughs? It has been my custom for some time to treat each of the conditions after this general plan: If constipation is present, which is generally the case, I find that small doses of calomel and soda open the bowels freely, and if they do not, I follow them with a saline purgative; then I give the following:

℞ Antikamnia and codeine tablets, No: xxx.

Sig.: One tablet once every few hours.

"The above tablet contains four grains and three-quarters of antikamnia and a quarter of a grain of sulphate of codeine, and is given for the following reasons: The antikamnia has a marked influence over any febrile action, restores natural activity to the skin, and effectually controls any nervous element which may be in the case. The action of the codeine is equally beneficial, and in some respects enforces the action of its associate. The physiological action of codeine is known to be peculiar, in that it does not arrest secretion in the respiratory or intestinal tract, while it has marked power to control inflammation and irritation. It is not to be compared with morphine, which increases the dryness of the throat, thus often aggravating the condition, while its constipating effect is especially undesirable."

Test for Tubercle Bacilli.—Of the various methods employed for staining tubercle bacilli in sputum, Benysek, *Pharm. Ztg.; Am. Med. Surg. Bull.*, recommends the following: The sputum to be examined is evenly divided and pressed between two sterilized object glasses, and then exposed to the air, preferably under a bell-jar, to dry. All heat is to be avoided, as the stains then become less distinct. The dry sputum is now moistened with a mixture composed of a concentrated alcoholic solution of fuchsine 4 parts, carbolic acid 5 parts, and water 45 parts, and gently warmed over a spirit-lamp until vapors rise. It is then washed with water and stained with a solution of methylene-blue to which 10 per cent. of sulphuric acid is added. After four to six minutes it is again washed with water and finally dried.

Through this treatment, the tubercle bacilli acquire a dark-red color, while the rest of the specimen is colored light blue. Other bacteria are not stained by this procedure. Very good results are also said to be obtained by staining with an alkaline solution of methylene-blue and malachite-green; but this is a slower process than the above.

Operation of Varicose Veins.—I have treated, *Nice Méd.*, 164 cases of varices without a single failure, by means of hypodermatic injections, eight drops at a dose, into one of the principal varicose confluents, of a solution containing iodine and tannin, one and nine parts respectively; the operation is without anæsthesia, and repeated when necessary, during which the patient stands, a rubber tube having been placed at the root of the thigh. By this operation a hypertrophic phlebitis is brought on with thickening of the venous walls, and consequent resistance to dilatation. After operation the veins are compressed ten centimeters above and below the puncture, the limb wrapped in boric-acid cotton, and the patient kept rigorously on his back in bed. The possibility of embolism is purely theoretical and not borne out by facts.

Errors in Diagnosis. — The difficulty which exists in making an accurate diagnosis of many

injuries to the head has again been shown at the Vincennes Barracks in a case of fracture of the skull which was not recognized, and was thought to be only a slight injury until the man became rapidly worse and died. Such mistakes must, unfortunately, from time to time occur, although happily they are rare, *Brit. Med. Jour.* The rarity of such accidents of diagnosis in London reflects the greatest credit on the care of the hospital house surgeons. It is practically impossible for the public to realize the many difficulties which often lie in the way in these cases. There is, perhaps, no external injury to act as a guide, and too often the patient is in a condition of complete stupor from drink when brought into the hospital; usually he has been found unconscious, and no reliable history of any injury can be obtained. It is, indeed, scarcely to be wondered at if mistakes should sometimes occur under these conditions, although great care may have been taken to avoid them; and more especially so when it is remembered what a very large numter of patients are every day brought in.

A NEW METHOD OF LOCAL ANÆSTHESIA.—The subcutaneous and parenchymatous injection of a weak cocaine-morphine solution, known as Schleich's method of local anæsthesia, seems to have found a good deal of favor with some surgeons. *Med. Press.* Indeed one surgeon is so highly convinced of its efficacy that he read a paper upon the subject before a recent meeting of a medical society, and then and there at the meeting, before the members present, had an injection administered into his forearm, submitted to an incision of the skin an inch in length, and lastly, had the incision sutured without manifesting any feeling of pain. He subsequently admitted that the procedures were absolutely painless, and he expressed the opinion that at least fifty per cent. of the operations now done under general anæsthesia, will ultimately be performed by the aid of this method.

TREATMENT OF DIARRHŒA.—For diarrhœa accompanied by pain and colic, and for diarrhœa which follows immediately after meals, the author, Dr. Shaller, in *Alkaloidal Clinic*, has found a combination of codeine and sulpho-carbolate of zinc efficacious. The combination also acts favorably in those cases in which pain follows immediately after eating and is accompanied by looseness of the bowels. He uses a tablet composed of one grain of sulpho carbolate of zinc, one and one-fourth of a grain of codeine sulphate, together with a small amount of hyoscyamine and sulphate of strychnine. For children, one of these tablets is dissolved in water, the dose being adapted to the age of the child. The author believes this combination not only prevents decomposition, but diminishes the secretion and checks peristalsis.

PRURITUS OF THE SCROTUM.—Pruritus of the scrotum is a most painful and rebellious affection, and, according to Brocq, constitutes a regular cutaneous neurosis. The itching is sometimes so intelorable that the patient becomes almost delirious. Prof. Procq advises the following treatment:

℞—Phenic acid, ... ʒ v.
Glycerin, ... ℥ iss.
Alcohol, ... ℥ j
Water, ... ℥ x.—M

Mix one part of this solution with four of hot water, and steep it in a compress folded eight or ten times, and then apply it to the scrotum, maintaining it in place with an india-rubber suspensory bandage.

As a general treatment he gives antipyrine in small doses (ten grains repeated twice in the afternoon), and valerianate of ammonia at night.

ACCURATE ADMINISTRATION OF LITHIA.—Wm. R. Warner & Co.'s original Lithia Water Tablets (3 and 5 grains) admit of an accurate dosage of Lithia not to be obtained in any natural Lithia Water. These tablets are securely packed so as to maintain their permanency, in consequence of which, when a Lithia Water Tablet is placed in a glass of water it quickly dissolves, effervescing in so lively a manner as to excite the interest of the patient to such a degree, that the unpleasant thought that he is about to take a medicine, does not arise. Now that Lithia has become a valuable remedy for rheumatism, lithemia, gout, gravel, Bright's disease, etc., these tablets are without doubt the most convenient method to administer it, as enough Lithia Water Tablets may be carried in the pocket to make 2½ gallons Lithia Water of definite strength.

For Constipation and the resulting fermentation and abdominal bloating, the following mass is recommended in the *Philadelphia Policlinic*:

℞—Creasote (beech-wood), . . . ♏ lxxii.
Purified ox-gall, ... gr. lxxii.
Pancreatin, ... : . . gr. xxxvi.
Ext. nux vomica, ... gr. xii.
Phenyl-salicylate, ... gr. xxxvi.

M. Sig.—Make a mass. Divide into 36 equal parts and dispense in capsules. Dose:—One capsule immediately after each meal.

Four grains of aloin may be added to the mass if not sufficiently laxative.

Treatment of Cancer by Serotherapy.—Our French correspondent, *Med. Pres.*, reports that at the last meeting of the Paris Academie des Sciences, Drs. Hericourt and Richet presented a paper in which they recorded the results of their investigations into the treatment of cancer by serum. They injected an animal with extract from a sarcomatous tumour, and subsequently used the serum of the animal for injections into the human subject. They state that, short of actual cure, which they do not claim, the greatest benefit followed the injection. Pain was decidedly relieved, the ulceration healed up, and the tumours reduced in size, and they are encouraged to hope eventually for complete cure.

Surgical Uses of Kerosene.—Schirman, *N. Y. Med. Jour.*, reports the satisfactory employment of kerosene as a local application to wounds and ulcers of the trunk and extremities. Ulcers, especially indolent and atonic ulcers, were smeared with commercial kerosene, either pure or diluted (from 35 to 50 per cent.) with alcohol, by means of a small camel's-hair brush or with a piece of gauze soaked in the solution. The appearance and character of the ulcers soon changed for the better, the discharge gradually diminished, and in from two to four weeks the rapidly granulating surface formed a scar without any contraction in the surrounding parts. The advantages claimed for kerosene are rapidity of action, economy of cost, and freedom from complications and toxic effects.

Bailey & Fairchild Co., of New York, take pleasure in announcing to the Medical Profession the establishment of the Doctor's Story Series, to be issued quarterly at $2 a year, 50 cents a number. Each number will consist of a complete work of fiction by medical authors. Only such works as are of established value will be reproduced in this popular form. King's "Stories of a Country Doctor," will be issued January, 1896, to be followed in March by Dr. Phillips' wonderful novel "Miskel," and later by a new novel now in preparation by the same author.

The Anatomy Law of Wisconsin has been changed, making it obligatory upon public officials to deliver to the secretary of any local or State medical school, any unclaimed body that is to be buried at public expense.

Septicæmia.—The latest treatment for general septicæmia is hypodermic injections of creosote. The creosote is mixed with equal parts of camphorated oil, and twenty minims of the solution are injected three times a day.

Books and Pamphlets

Consumption: Its Nature, Cause, and Prevention; with an outline of the principles of treatment. By Edward Playter, M.D. Toronto: Wm. Briggs. 1895. pp. 300.

The author, who has for twenty years been editor of *The Canada Health Journal*, has himself made some special investigations relating to the causes of consumption, and during a practice of over a quarter of a century given special attention to the subject. He believes, and quotes high authorities to show that the body factor or condition —the so-called "soil"—arises directly and immediately from the decomposition of retained effete substances in the blood and tissues, the result of imperfect metabolism, from a proportionately small respiratory capacity and want of oxygen; and that this factor, rather than the bacillus, should be regarded as the exciting cause of the disease, often giving virulency to the bacillus, also an essential factor. He believes the disease is in a degree infectious, but that preventive measures should bear rather against the body condition as the more important and preventable cause, and quotes Sir James Clark and others in support of this. The following indicates the heads and sub-heads under which some of the preventive measures are treated: Pure air, soil, dwellings, bed-rooms, respiratory

exercises, sitting and lying out-doors, occupation, preventing "colds," words to parents, marrying, state measures, public instruction, drainage, better inspections, sanitaria, with chapters on climatology and a short one on the climate of northern New York, Vermont, and Canada.

Dont's for Consumptives; or the Scientific Management of Pulmonary Tuberculosis:

This is the title of a book which, under the authorship of Dr. Charles Wilson Ingraham, will soon (about Feb. 10th) be issued by the Medical Reporter Publishing Co. of Rochester, N.Y. The complete work of 35 chapters is devoted exclusively to the general management of Pulmonary Invalids, no reference whatever being made to drug treatments, The object of the author is to supply the phpsician with a practical work, and at the same time, by eliminating technical terms, reduce the text within the easy comprehension of the intelligent patient. The author claims that "a good understanding of his condition is the best remedy for the consumptive." With this book in the hands of his patient the physician will be relieved of a multitude of details which attach to the successful management of such cases. Special attention has been given those chapters pertaining to the destruction of tubercular infection. The book will be printed on 72-pound antique book paper, bound in cloth (imitation morocco), with title in gold leaf. Price, $1.75.

Hand-book of the Diagnosis and Treatment of Skin Diseases. By Arthur Van Harlingen, Ph.B., M.D., Emeritus Professor of Dermatology in the Philadelphia Polyclinic, etc. Philadelphia: P. Blakiston, Son & Co., 1895.

This is the third edition of Van Harlingen's well-known book. The author has added copious reference and foot notes, and has introduced articles upon some of the rarer affections of the skin. It contains sixty illustrations, several being in colors. Some changes in the text have been rendered necessary by recent additions to our knowledge in the department of bacteriology. Some new methods of treatment and new formulas have been introduced, while others have been omitted as being out of date. The work is sufficiently extensive for the ordinary practitioner or student, embodying, as it does, all that is really necessary for diagnosis and treatment.

The Care of the Baby. A Manual for Mothers and Nurses. By J. P. Crozier Griffith, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, etc. Philadelphia: W. B. Saunders, pp. 392, $1.50.

The author has furnished a reliable guide for mothers regarding the best way of caring for their children in sickness and in health. The work deals with the hygiene of pregnancy, bathing, dressing, and feeding of children of different ages; the proper hours for sleeping; physical and mental exercise, and proper qualities of nurses; and of worms, and the disorders of childhood. It is well written and an excellent guide for mothers and nurses.

A Guide to the Practical Examination of Urine. By James Tyson, M.D., Prof. of Clinical Medicine in the University of Pennsylvania, etc. Ninth edition, revised and corrected, with a colored plate and wood engravings. Philadelphia: P. Blakiston, Son & Co., 1895.

This work is so well and favorably known that it is only necessary to say that the present edition (ninth) brings it up to date. No large additions have been made, while some less important paragraphs have been omitted, thus keeping the book to its moderate size. It is one of the classics for the practitioner and student.

Manual of Life Insurance Examinations. By James Thorburn, M.D., Ed., Emeritus Professor of Pharmacology, University of Toronto, etc. Toronto, 1895.

This is the second edition of a useful little brochure. Intended for the convenience of medical examiners, it has admirably fulfilled its purpose, and has been largely used by all the leading companies.

"The Non-Heredity of Inebriety," by Leslie E. Keeley, M.D., LL.D., is the title of a timely volume now in the press of S. C. Griggs & Co. The author endeavors to show that inebriety is a disease, and that it, as well as other diseases, is not hereditary. The work is said to differ from others on inebriety in its application of the doctrines of the variation of species and natural selection to cell life, thus showing the causes and nature of disease, its modern scientific treatment, and the philosophy of immunity to disease in general, and inebriety in particular—all in language within the comprehension of the general reader. The international reputation of the author as an original investigator in matters pertaining to inebriety should make this work valuable to scientists, the medical profession, and to all who are, by legislation or otherwise, endeavoring to correct the evils of intemperance.

The Canada Lancet.

VOL. XXVIII. | TORONTO, MARCH, 1896. | No. 7.

CLUB FOOT.*

By B. E. McKenzie, B.A., M.D., Toronto.

In order to appreciate properly the problems which present themselves in dealing with club-foot, it is necessary that we have an intimate knowledge of the normal anatomy and architecture of the foot. The foot has been aptly described as a tripod having one point of support at the heel and two in front. In the skeleton the longitudinal arch terminates behind in one bone, the oscalcis, but as it proceeds forward the arch widens, so that in front it terminates in the five meta-tarsal bones, and rests chiefly upon the first and fifth. Transverely each foot has a half arch. When the feet are brought together, so that their inner borders are in contact, there is thus formed a complete arch whose extremities are found at the outer borders of the feet. Thus the two feet are complimentary the one to the other, and when brought together so that their inner margins are in contact there is a dome shaped space covered by two arches. The weight of the body in standing is transmitted through the leg to the astragalus through which it passes chiefly to the oscalcis, as this bone lies almost directly in the line of transmission of the body weight. The downward pressure, however, falls upon the inner side of the oscalcis. The astragalus is so placed in regard to it that it tends to roll the foot over upon its inner margin, the sustentaculum tali having no direct support. In walking, however, as each foot is placed upon the ground there is an outward impact which makes necessary the support which is found at the outer margin of the foot. The continued existence and normal condition of these arches are necessary for free, graceful and easy movements. They are maintained in position partly by the form of the bones, partly by ligaments which act as tie-beams and more especially by muscles. Behind, the longitudinal arch rests upon the tubercle of the oscalcis, the rest of the bone not coming directly into contact with the ground. The head of the first meta-tarsal also makes direct contact, while the fifth meta-tarsal has its head and base in contact with the ground.

The most important ligaments which assist in supporting the arches are the inferior calcaneo scaphoid, the two plantar calcaneo-cuboid ligaments and the various slips of the tendon of the tibialis posticus as they pass through their attachments to the different tarsal and meta-tarsal bones. The plantar fascia also acts as a powerful support to prevent spreading of the pillars of the arch. The chief muscles which support the arches in their normal condition are the tibialis anticus, tibialis posticus, flexor longus digitorum, flexor longus hallucis and peroneous longus.

There are no immovable piers to prevent separation of the extremities of the arches, hence the work of maintaining them in their normal condition falls upon the ligaments and muscles chiefly. In the skeleton the parts of the bones above named come directly into contact with the ground, and the work of holding the foot in its position falls chiefly upon the muscles. The astralagus, the only bone of the foot which receives the whole weight of the body at any time, is so placed that

*Abstract was read before the Toronto Medical Society.

it articulates by means of its large posterior facet with the oscalcis. Its head, however, is received into a large socket which is formed for it by the sustentaculum tali, the scaphoid and two ligaments which pass between the oscalcis and the scaphoid, namely, one below, the inferior calcaneo scaphoid, and another on the outer side, the external calcaneo scaphoid ligament. There are four ligaments which hold the astralagus in its place, of which the interosseous is the most powerful. The external lateral ligament is a short band which proceeds from the outer surface of the astralagus to the outer surface of the oscalcis. The posterior ligament passes from the posterior border of the astralagus to the oscalcis. The dorsal ligament passes from the head of the astralagus to the scaphoid. The two lateral ligaments of the ankle joint also help to keep the astralagus in its place.

The inferior calcaneo scaphoid ligament fills up the angular gap between the sustentaculum tali and the scaphoid bone, and is an important element in forming the socket for the head of the astralagus, and is placed at the point of greatest strain in supporting the longitudinal arch. In contact with it upon its inner side is the tendon of the tibialis posticus, so that this point upon which falls so much of the strain in bearing the body weight, receives both muscular and ligamentous support. The cuboid is bound to the calcaneum by four ligaments, the two plantar ligaments, and one dorsal and one internal ligament. In maintaining the longitudinal arch of the foot, the plantar ligaments are second in importance only to the inferior calcaneo scaphoid. The superficial one passes from the under surface of the oscalcis in front of the tubercles, and extends to the inferior surface of the cuboid and has fibres which extend broadly to become attached to the three middle metatarsal bones.

FIG. 1—Showing Incision in Phelps' Operation.

The tibialis anticus has its origin on the front of the leg, and passing down to the inner margin is inserted into the internal cuneiform bone, and the base of the first metatarsalbone. It thus serves (1) to flex the ankle joint; (2) to draw upward the inner border of the foot and thus invert the sole; (3) to adduct the front portion of the foot. The second and third of these movements occur chiefly in the nediotarsal and calcaneo-astragaloid joints. In walking this muscle lifts the anterior part of the foot, enabling the foot to clear the ground when the leg is swinging forward. The tibialis posticus has its origin in the back part of the leg, passes downward behind the inner malleolus contained in a synovial sheath which accompanies it to its insertion upon the scaphoid bone. It also sends several fibres to be inserted into the sustentaculum tali, and all the other tarsal bones except the astragalus. It also sends fibres of insertion to the bases of the 2nd, 3rd, and 4th meta-tarsal bones. This powerful muscle therefore acts, (1) to adduct the front of the foot; (2) to invert the sole; (3) to extend the ankle; (4) to support the longitudinal arch. Its insertion into the scaphoid enables it to draw this bone backward against the astragalus, preventing the downward movement of the arch at the point where the greatest strain falls upon it. The flexor longus hallucis arises in the back part of the leg, and passes downward and inward behind the lower end of the tibia in a groove at the back of the astragalus under the sustentaculum tali-passing forward to be inserted into the base of the last phalanx of the great toe. Thus passing under the sustentaculum tali it serves as an important support to prevent the rolling inward of the foot when the weight of the body is being transmitted through the astragalus to the ground.

The flexor longus digitorum also passes from the back of the leg behind the inner malleolus beneath the internal angular ligament, and forward to its insertion into the toes. The peroneous longus arising from the outer side of the leg passing downward behind the external malleolus beneath the external angular ligament to the outer border of the foot, changes its position, and through a groove in the cuboid bone it passes obliquely inward and forward across the sole of the foot to its insertion near the inner border of the sole, into the base of the first meta-tarsal bone and the internal cuneiform. This muscle acts, (1) to extend the ankle joint; (2) to adduct the anterior part of the foot; (3) to depress the inner border and so to evert the sole. By drawing backward and outward the base of the first meta-tarsal bone, it tends to render more concave the antero-posterior and transverse arches of the foot. Thus while in part of its action it tends to oppose the tibial muscles, on the other hand, it assists them in maintaining the longitudinal arch. The tendo Achillis, by which the powerful muscles forming the calf of the leg are inserted into the posterior end of the oscalcis, raises the heel from the ground lifting the weight of the body, and slightly adducting the foot and inverting the sole. The latter motion occurring at the joint between the astragalus and the calcaneum.

Pathological Anatomy.[1]—The various abnormal positions assumed by the foot, and thus constituting its deformities are only exaggerations of positions which are normal and physiological.

There are four main divisions made of the deformities of the foot:

(1) Talipes equinus—exaggerated extension.
(2) Talipes calcaneus—exaggerated flexion.
(3) Talipes varus—exaggerated adduction.
(4) Talipes valgus—exaggerated abduction.

It is seldom that any one of these exists alone, It is generally associated in some degree with another form, for example the equinus and varus which when combined constitute the ordinary club-foot, also calcaneous and vulgus are frequently associated. The term club-foot is generally employed to designate the combination of an excessive degree of extension and adduction. This deformity may be defined as consisting of inversion, torsion and depression of the front part of the foot accompanied by elevation of the heel so that when the subject of deformity is in the erect position the outer border of the anterior portion of the foot alone constitutes the walking surface. The plantar surface is not directed downward but in a varying degree backward and upward. The degree of severity of the deformity will depend upon the amount of exaggeration of positions that are in themselves normal. This is the most common deformity of the foot constituting about three-quarters of all cases, and is mostly congenital. In a typical case all the structures of the foot, bones, ligaments, muscles, fasciæ and skin take part in the distortion.

The deformity is not alone one of the foot proper but has also to do with the relationship of the foot to the leg, and even the leg bones in strongly marked cases are abnormal through relative shortening of the tibia, especially of its inner border, while the fibula at its lower end occupies a plain anterior to the normal, so that a line joining the centres of the malleoli looks anterior and is directed more inward than in the normal condition The scaphoid bone is found articulating with the inner surface rather than with the anterior end of the head of the astragalus, and in some cases an articular facet is found on the scaphoid where it articulates with the tibia and there is frequently a firm ligamentous attachment between the scaphoid and the inner malleolus

FIG. 2.—A case, 10 yrs. old, corrected by tenotomy.

which constitutes a marked obstruction to the rectification of the varus. Sometimes a separate synovial membrane lines the false joint thus formed beween the tibia and the scaphoid.

The facet for articulation of the scaphoid is rather underneath and internal than at the anterior part of the head of the astragalus. The cuneiform bones follow the direction which has been assumed by the scaphoid, and are distorted in shape according to the amount of pressure they have withstood. The entire inner border of the foot when measured from the inner malleolus to the anterior extremity is sometimes not more than half the distance from the external malleolus to the extremity of the little toe. The cuboid bone is displaced inward and the anterior extremity of the oscalcis constitutes a part of the walking surface which may be readily outlined by palpation.

The oscalcis is drawn from a horizontal position to one approaching a vertical and is rotated on its long axis. This rotation is favored by the tendo Achillis being inserted more toward the inner aspect of the bone than in a normal foot. The external border of the oscalcis is sometimes elongated to the extent of one-sixth its own length and curved on its outer aspect thus accounting partially for the incurration of the distal portion of the foot.

The cuboid bone maintains its association with the oscalcis but is generally dislocated downward as well as inward and follows the trend of the anterior part of the foot. The cuboid generally deviates little in shape from the normal but there is sometimes a slight increase in the length of its external surface.

The scaphoid is generally much changed. Posteriorly it may present two facets, the inner articulating with the internal malleolus and the outer with the inner aspect of the head of the astragalus. The internal surface is often not more than one-third the thickness of the external. The greater part of the scaphoid lies internal to the astragalus instead of in front of it.

The deviation from the normal shape of the astragalus is very marked. It is tilted forward on its transverse axis, so that only the hinder part of its upper articular surface is in contact with the tibia; and the part which corresponds usually to the anterior portion of its upper articular surface projects beneath the skin of the dorsum of the foot. The body of the bone is deeper in front than behind; the posterior facet for articulation with the oscalcis is increased in

FIG. 3.—Corrected by tenotomy and *brisement forcé*.

extent to nearly twice the normal size. The external border of the neck is much elongated and convex from before backward, the neck being directed obliquely inward beyond the normal degree and its inner border is very short.

In the more severe varieties the normal depression on the dorsum of the foot just in front of the fibulæ will be occupied by an irregular mass of bone which is the astragalus placed so far forward that the bones of the leg behind are not resting on this bone but upon the oscalcis—this resulting from long continued contraction of the tendo Achillis. In such cases the astragalus is so altered in shape as to be unrecognizable.

Both the ligaments and tendons are shortened on the inner border and plantar aspect and relatively lengthened on the outer border and dorsal aspect. The normal longitudinal arch of the foot is shortened and twisted and its anterior pillars moved inward. The inferior calcaneo-scaphoid and the plantar calcaneo-cuboid ligaments and the various slips of the tendon of the tibialis posticus are all shortened. The plantar fascia also, which serves as a tiebeam between the extremities of the pillars of the arch and even the

skin of the plantar surface and internal border are much shortened. By reason of the foot being so much extended the tibialis anticus is put on the stretch and helps to keep the inner border of the foot elevated. The abductor hallucis is shortened in a marked degree, also the flexor hallucis, and the long flexor of the toes; in fact, even in a mild case of the deformity there is no structure of the foot which is not modified by its abnormal relationships and alterations of function.

The position of the posterior tibial artery is worthy of careful observation. Even the normal artery is in danger when it is necessary to cut the structures about the inner malleolus; and sometimes the vessel is drawn away from its proper relationships. In the dissected foot which is here presented, which was taken from a hydrocephalic infant, it will be seen that the posterior tibial artery lies directly between the tiblialis posticus muscle and the tibia.

Etiology.[2]—Various theories have been propounded setting forth the causes of club foot, but up to the present no general concensis of opinion has been reached. The theories which have met with a certain amount of favor are :—

(1) The dynamic or spasmodic muscular contraction theory.

(2) The mechanical theory.

(3) The arrest of development theory.

(4) The defect in the germ theory.

Diagnosis.—The determination of the existence of this deformity is seldom a matter of difficulty. In infancy there is sometimes a spasmodic condition of the tibiales which cause the foot to similate this deformity. Manipulation, however, by the mother or nurse with massage, for a short time, soon restores the foot to a normal condition.

The magnitude of the deformity varies much at birth, depending greatly upon the natural formation of the foot. If the child be of stout build and strong bone the foot is likely to be short and the deformity hard to correct. On the other hand, if the child be of slender build, and the foot long and bones in general rather small, the deformity, though quite as marked in degree, is much more easily corrected. The degree of resistance varies much from the mildest ones in which complete correction can be at once made and retained by the hand to those in which resistance to correction is offered by greatly deformed bones, shortened ligaments, muscles, fasciæ and skin, to such an extent, even in infancy, as to entirely preclude the possibility of rectification without cutting, lacerating or prolonged stretching of the above structures.

The difficulties in the way of rectification are greatly increased with age. In walking, the weight is borne in such a manner as to confirm the foot in its abnormal position. Movement at the astragalo-crural joint becomes less, a bursa develops where the foot comes into contact with the ground, and in the adult corns, ulcers, and sometimes sinuses not only make walking very painful or impossible, but also introduces complications which stand in the way of the surgeon when treatment is to be adopted.

Treatment.—Cases of club-foot vary greatly in the amount of deformity, and in the difficulty that opposes the surgeon's efforts to correct. When the foot is very short and chubby the course of treatment is rendered much more difficult. In some instances the foot may be placed in such a position as to correct the varus without any forcible manipulation. The equinus can seldom or never be corrected without prolonged treatment or operation. [3]Operative treatment for the correction of club-foot is of comparatively recent date.

FIG. 4.—Three years elapsed before photo showing correction was made.

From the time of Hyppocrates the treatment consisted in the use of manipulation and bandages, or fixed apparatus and hygienic measures. The more severe cases of the deformity were regarded as hopeless malformations, and were the opprobrium of surgery. In the year 1784 Thilenius advised section of the tendo Achillis, which was done by an open wound, and gave a good result. In 1804 Sartorius divided the same tendon, but the result was less successful. Other operations of a similar kind, performed at a later date, were followed by suppuration and sloughing of the tendons.

Great advance was made by Stromeyer, who, in 1834, advised making the external wound a mere puncture, thus gaining for himself the credit of introducing the method of subcutaneous section. This method was soon established and adopted as a safe and reliable method of treating club-foot in Germany, in France and in England. To Dr. Little, who himself suffered from deformity of the foot, is due the credit of having appreciated the value of Stromeyer's method of treatment before the profession of England, the valuable results of his experiments.

A further advance in the operative treatment of this condition was made when the principles were adopted that were first scientifically formulated by Sir Joseph Lister.

The treatment of these cases must vary according to the age of the patient and the conditions present in the deformed foot. In a child the bones are to a large extent cartilaginous while the ligaments, tendons, fasciæ, and softer tissues are more yielding than in the adult ; consequently in children under two or three years of age the use of the knife is seldom necessary, though a wise employment of operative measures may greatly shorten the time and lessen the difficulties of treatment. In children beyond this age and in adults there are few cases that can wisely be treated without the employment of the knife.

For the purpose of treatment the deformity should always be considered as consisting of two elements, first and chiefly, a deformity of the foot *per se*, second, an abnormal relation of the foot to the leg. In all cases it is better that the deformity of the foot should be entirely corrected before any effort is made at rectifying the deformity which exists at the astragalo-crural joint. By proceeding in this manner the prominence at the outer and dorsal aspect of the foot over the cuboid and oscalcis may be regarded as a fulcrum over which may be pried the distal portion of the foot as one end of a lever while the oscalcis in continuation with the leg bones is the other portion of the lever. In this way a powerful mechanical advantage is gained in the correction of the varus.

FIG. 5.—Corrected by open incision.

[4]In dealing with infants and young children an anæsthetic may be administered and the distal portion of the foot having been grasped by the hand of the operator it is strongly deflected outward and a covering of absorbent cotton having been placed upon the foot and leg as far as the upper part of the tibia a retentive dressing is applied. It is necessary in this case to see that the prominences, *e.g.*, the head of the first metatarsal bone and the bend at the oscalcis and cuboid bones are carefully and deeply padded so as to pre-

vent abrasion. The most eligible of the fixed dressings thus employed is plaster of Paris.

The success and satisfaction attendant upon treatment will depend much upon the quality and preparation of the dressing employed. The plaster of Paris should be of the highest grade, that which is used by dental surgeons (sold as F. F. F. plaster). It should be so preserved that it will not be exposed to the air or to moisture. The bandages are made by tearing into strips of a necessary width some light, open meshed material. For this purpose the writer has found what is sold in Canada as book-muslin the most satisfactory form of web as foundation for the plaster. In the United States, surgeons employ what is purchased in the shops as crinoline. This should be torn into strips varying from two to five inches in width and from three to six yards in length, the smaller being used in the treatment of infants and children while the larger are found more satisfactory in dressing the feet of the adult.

Various machines are used for rolling the bandages, embodying the plaster as the rolling is done. The work, however, may be quickly and satisfactorily accomplished by rolling with the hands, spreading the plaster on the web, and rubbing in evenly with the edge of a table knife or druggist's spatula. The bandage should then be wrapped in paper and kept in a tin box ready for use.

In manipulation of the foot of a child, with a view to making correction, it is well to bring only the softer portions of the surgeon's hand into forcible contact with the parts that are to endure most pressure, *e. g.*, the head of the first metatarsal bone and the prominence over the cuboid and astragalus. If some minutes are occupied in moulding the foot into shape, and if the correction be carried during manipulation, further than it is intended to retain the foot in the dressing, the likelihood of causing abrasions or sloughing is rendered much less. Pressure with the tips of the fingers or with one or two fingers upon the plaster, while it is setting may be productive of unpleasant results, causing ulceration of the parts beneath. Constant watchfulness is necessary, but, when due care is exercised, the utmost confidence may be felt that no harm will result from pressure.

The dressing applied should be left on for a period varying from one to several weeks, and having been removed the foot should be left without dressing for several days, massage to be employed and the foot frequently manipulated so as to stretch the shortened structures at the inner side. This may be accomplished by an intelligent nurse or mother without creating any alarm in the child, thus favoring the development and healthful condition of the foot.

A second dressing is applied in the same manner as the first, the foot having been so everted as to carry the correction further than was done on the first occasion. After a week or more this dressing is removed and the case treated as before. These dressings are repeated from time to time until the varus is quite over-corrected and the distal portion of the foot is strongly everted.

If the child has been walking, and for this or any other reason the speedy correction of the deformity is desired, more forcible manipulation may be employed while using an anæsthetic from time to time and the over-correction of the varus be more speedily effected. Time, however, is an important element in the satisfactory correction of this deformity, as relative atrophy and shortening must result in the tissues of the outer side of the foot, while lengthening and growth must occur in those of the inner side, if the remedial measures are to be followed by an ideally successful and permanent result. In his earlier experience the writer frequently performed tenotomy especially of the tibiales at the commencement of his treatment, but now finds it quite unnecessary in most children under three or four years old.

Though the manipulation and dressing as above

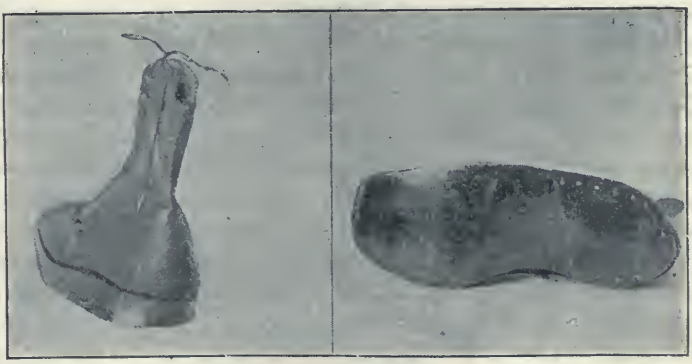


Fig. 6.—The Day Shoe.

described nearly always causes the child to cry vigorously at the time if done without anæsthesic, yet the evidence of suffering passes away quickly, and, from the first, the child sleeps and rests as if nothing unusual had occurred, and, in at least one instance in a girl of four years, complete correction of a well marked deformity was effected, the foot, however, not being short nor very difficult to replace, without any crying of the child except at the first dressing.

It is quite unnecessary that at any stage of the treatment abrasion should occur if care is taken in manipulating the foot to bring only the soft parts of the operator's hand into contact with the foot, and if evenly distributed padding, with due attention to the prominent parts of the foot, may be used.

In the management of these cases in infants, the inversion and inward torsion of the foot should be well over-corrected sometime before the period when the child may be expected to walk, so that treatment may be adopted for the correction of the equinus, which depends largely upon the abnormal relationship which exists between the parts at the astragalo-crural joint.

In correcting the equinus the deformity which demands our attention is dependent upon the great increase in the depth of the anterior portion and the thinness of the posterior portion of the astragalus, upon the shortening of the tendo Achillis, the flexor longus digitorum, flexor longus hallucis, tibialis posticus, posterior annular ligament, fascia and skin at the back of the foot and ankle. In many instances this deformity may be satisfactorily and permanently corrected without the use of the knife, but much time is gained, and the patient is saved from suffering by subcutaneous section of the tendo Achillis. This tendon presents the chief obstruction to rectification, and when it is cut, nearly all cases may be so flexed in the direction of the dorsum of the foot as to bring the plantar surface up to an angle of 90° or less with the axis of the leg. The manipulation and dressing at this stage of the treatment are conducted as in the former part. The unexperienced, however, may easily fall into error and apply his dressings in such a manner as to cause abrasion in front of the ankle. As soon as the application of plaster of Paris is commenced, the foot must be held in the position it is intended to remaid in after the plaster has hardened. If the foot is permitted to remain extended while the bandages are being applied, and then the foot is flexed before the plaster hardens, undue pressure is thus made in front of the ankle which may cause extensive sloughing.

It is quite unnecessary to have brought the treatment to this stage until the time has come when the child may be expected to walk. The weight of the child and the action of the foot in walking constitute a most important factor in the rectification of the deformity and the restoration of normal function.[5] There is a great difference between a child recumbent and a child walking.

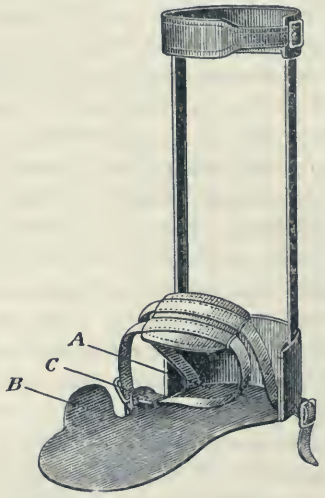


FIG. 7.—The Night Shoe.

A child in arms is yet free from the complications caused by falling of the weight of the body on the foot as it is retained in its abnormal position. If previous to this period the foot has been so changed that when the child begins to walk, the plantar surface comes into contact with the ground, then the weight of the body is changed from a deforming to a correcting agent.

During this period of treatment, *i. e.*, the period antedating the time when the child walks, various mechanical means in the way of club-foot shoes have been employed, but in the opinion of the writer there is no means of correction so effectua and satisfactory as that above described. The fixed dressings referred to, do no harm in producing atrophy or in any other way, if sufficient time is permitted between dressings for massage.

[6]When, however, correction of the varus and

equinus has been fully made, the time has come when mechanical appliances may be advantageously employed. Though other mechanical means than that referred to in the fixed dressings may be quite unnecessary for the rectification of the deformity, yet for the retention of the foot in its new position, and for the prevention of relapse, effectual mechanical appliances are essential. The shortened tissues of the inner side, when stretched so as to permit even of over-correction, long manifest their elasticity and a disposition to invert the foot. Also where the weight of the body does not fall upon the arch of the foot as in walking, but where the anterior portion of the foot is deflected inward, it manifests a tendency to resume its original position, the heel being drawn up, and the anterior portion of the foot depressed. This is the case especially at night when, the patient lying in bed, the bed-clothes draw the foot downward toward its old position of deformity; hence there is necessity for mechanical means to be employed to retain the foot in its corrected position, both in the day-time while the patient walks about and also at night.

To prevent relapse in the day time the most successful means is employed when a boot is properly constructed. The last should be broad, and should differ from an ordinary last in being everted at the part which corresponds to the mid-tarsal joint. A model for making lasts of this kind may be obtained by taking a good last made for a normal foot, sawing through its inner border at the part which corresponds to the nedio-tarsal joint putting a wedge of say, one half or three-quarters of an inch into the cut thus turning the anterior part of the last outward; the lasts which are made following this model will be suitable or the construction of a proper boot. The boot should always fit accurately and should be made of firm leather. The ordinary heel-counter should be carried forward at the outer margin as far as the base of the fifth meta-tarsal bone and a resisting counter should be put in at the inner margin opposite the head of the first meta-tarsal bone. The sole of the boot and the heel should be projected latterly outward and should be built thicker than the heel and sole at the inner margin. In this way when the patient puts his foot down upon the ground the foot is made to turn into a position opposite to that in which it was found originally and the forces at work through the agency of the boot are made to counteract the tendency to relapse.

The appliance used at night is an exceedingly simple one, consisting of a foot piece made to fit correctly the plantar surface of the foot and attached at an angle of say, 80° to a leg piece which reaches to the upper portion of the calf, a heel guard being attached to the lower part of this leg-piece and extending upward four or five inches. A strap passes over the instep and holds the heel well down into the angle between the foot piece and the leg piece, thus keeping the foot in its relation to the leg at an angle of 70° to 80°, during the night. At the same time a strap may pass over the dorsum of the foot and between the foot and the sole plate and through a loop at the inner margin in such a way as to lessen the natural tendency to incurving of the foot at the mid-tarsal joint. These appliances are shown in Figs. 6, 7 and 8, and on the patients who are here exhibited.

Allow me to emphasize just here that the appliances described are not intended to be employed for the *correction* of club-foot, but only to *prevent relapse* in a foot that has been fully corrected.

There are classes of cases which are more difficult to treat than those above described. Where it is found impossible or impracticable to correct the deformity by manipulation, the tenotone should be employed for the cutting of tendons or bands of fascia which stand in the way of rectification. There is a large proportion of cases that may thus be treated making the incisions subcutaneously. The tendons most demanding this section are the tibialis posticus, the tibialis anticus, and the tendo Achillis. The plantar fascia, a portion of the internal lateral ligament and the inferior calcaneo-scaphoid ligaments also require setion in a considerable number of cases. The tibialis posticus and tibialis anticus are best cut by an incision that is made anterior to the internal malleolus quite close to their insertions. The tendo Achillis should not be cut until the varus has been fully corrected. In cutting this tendon its narrowest part should be sought after, which is at a short distance above the point of its insertion. Here the tenotome should be introduced at its inner margin so that the point may be directed away from the posterior tibial artery. The knife

may be introduced deeper than the tendon so as to cut toward the surface or may be introduced between the skin and the tendon so as to cut inward. The internal lateral ligament and also the calcaneo-scaphoid may be cut through the opening made in reaching the tibialis posticus. In cutting the plantar fascia it is well to introduce the tenotome at its inner margin as close to the tubercle of the oscalcis as possible. By so doing the knife is made to pass behind the plantar arteries and cutting may be done freely without any fear of hæmorrhage. The same precautions should be taken to secure an aseptic condition of the foot before making these subcutaneous sections as if an open wound were being made.

The next class of cases is such that rectification cannot be made even when tendons and fasciæ are cut subcutaneously. Here the simplest and most satisfactory method is that which is known as "Phelps' Open Section."[7] Phelps himself begins the operation always by cutting the tendo Achillis and then rectifying the deformity as much as possible. Personally I much prefer to commence by making an incision as he describes a little in front of the internal malleolus, extending downward and forward in the concavity at the inner margin of the deformed foot as far into the plantar surface as may be necessary. Through this incision are cut all the structures which will stand in the way of rectification. There may be especially enumerated the tibialis posticus, the tibialis anticus, the fascia at the inner border, the internal lateral ligament, the abductor hallucis, the short flexor, the plantar fascia, the long flexor of the toes and the calcaneo-scaphoid ligament. It must not be assumed that all of these structures are to be cut as soon as the incision is made. In many instances the deformity may be corrected when only the skin and the superficial structures have been cut. At each stage of the operation when any obstructing band has been incised an effort should be made with the hand to place the foot in a correct position. If this can be done no further cutting is required. However, if the foot cannot be placed in a corrected or rather an overcorrected position then further section is needed. It is claimed that some cases cannot be corrected even in this manner. If so, the next step is to make a linear section through the neck of the astragalus. Should it still be impossible to fully correct the foot then a wedge-shaped piece should be removed from the outer aspect of the oscalcis. Personally I have not found it necessary in more than one case to make a section of bone to correct any deformity of the foot.

The dressing of this wound is an important matter. In my first case I packed the wound from the bottom so as to control hæmorrhage. In this case healing occurred leaving a deep hollow at the inner margin of the foot, and other cases I have seen where a deep scar remained extending to the bone. I now dress over the wound leaving it without any filling. I find it quite possible to leave the dressings on for a period of two weeks or more without having any considerable elevation of temperature and on removing the dressings, frequently find the wound healed and the surface even. Hæmorrhage in this operation is very seldom troublesome. The vessels and nerves may be seen and avoided. After the dressing of the wound a plentiful layer of absorbent cotton is placed about the foot and limb as high as the knee and the limb incased in plaster of Paris.

When it is thought that the wound made at the inner border and plantar surface of the foot has sufficiently healed, then section of the tendo Achillis should be made, and the equinus corrected. In my experience there are few feet that may not have this portion of the deformity well corrected when complete section of the tendo Achillis has been effected. The foot must now be forced into a fully corrected position, *i. e.*, to say into one in which the plantar surface will make an angle of 80° or less, with the axis of the leg, and must then be retained in the fixed dressing for some weeks.

After section of any of the tendons or structures above named, there need be no hesitation in drawing the segments of the cut tissue as far apart as the circumstances require. It is not uncommon, for example, to draw the segments of the tendo Achillis an inch and a-quarter away from each other. If asepticism has been carefully secured union will be good, and the gap will be thoroughly filled in.

There remains still another class of cases. That in which the equinus cannot be fully corrected after section of the tendo Achillis. When the anterior portion of the articulating surface of the astragalus is so broad that it cannot be wedged in between the malleoli it may act as a fulcrum,

and if too great an amount of force be employed the entire foot be dislocated forward in its relation to the leg. This accident occurred with me in one case. Under these circumstances it is considered justifiable to remove the astragalus.[8] The removal of the bone has been favorably reported upon by several Americans, notably Morton, of Philadelphia, and has also been frequently performed in Germany. Koenig, however, has recently asserted that instead of removing the astragalus he prefers to persist in efforts made at short intervals to force the astragalus into the proper position.

Bone operations of all kinds on the foot, are to be avoided if possible. They maim the foot to an extent that is done by no other method. The foot in congenital varus is always short and imperfectly developed, and by the removal of a section of bone from the outer border the foot is made still shorter and its growth is possibly interfered with. On the other hand, the open section at the inner border of the foot, or the subcutaneous section of obstructing bands of tissue, so that the foot may be corrected by manual force, permits of a lengthening which is greatly of advantage both in appearance and usefulness. With increased experience I am more and more disposed to employ a greater length of time, and to put forth greater efforts to rectify the deformity by manual force, as much as possible avoiding cutting operations where the circumstances do not urgently demand that they be employed. I find that the less cutting that has been done the more perfect the form and function of the foot, that is to say, where the treatment of the case has been sufficiently persevered with to secure eventually the complete correction of the deformity. I show some cases here to-night in which voluntary motion at the ankle-joint is through an arc of 60 degrees, and in whom the plantar surface makes an angle of less than 80° with the axis of leg. In these cases the position of the feet must be regarded as most satisfactory. It is questionable whether any person seeing some of these children walk, or even examining the foot, would suspect that ever they were cases of club-foot.

Even when the deformity in the foot has been quite corrected, and when the relation of the foot to the leg at the astragalo-crural joint has been set right still there is in some cases disagreeable pigeon-toe manifested. This is due to the twist in the leg bones, by which the external malleolus is carried further forward than normal in its relation to the internal. This may be corrected by osteotomy of the leg bones, and then setting the segments in such a position as to correct the pigeon-toe. In children, however, I prefer to wear an appliance which is here shown, which consists of a band passing around the pelvis with which is connected at the side by a hinge-joint a bar which passes down to about the middle of the thigh, and then continuing downward is a coiled steel spring which is attached to the boot. Now, when the appliance is put on, and the boot so twisted as to have a tendency to turn the toe outward, it will induce in the patient the habit of turning out the toe, and eventually will in children evert the foot in its relation to the leg, that is to say, it exerts a force tending to untwist and therefore correct the deformity in the leg bones.

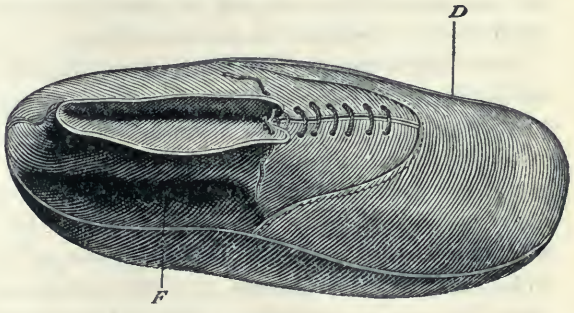


FIG. 8.—Showing day shoe.

The question is sometimes asked, when the treatment of club-foot should begin in an infant. My reply is that attention should be given to the subject as soon as the child is born. The mother or nurse should be instructed to grasp the foot in the hand and to evert the foot, that is to twist it toward the correct position. This manipulation should be repeated several times a day. It has the effect of not only correcting the deformity, but also of increasing the development and mobility of the foot. If this plan be intelligently followed until the child is 8 or 9 months old, some cases can be completely corrected so that the active interference of the surgeon is not demanded. Other cases which are more resistant although not entirely corrected by this treatment, will be so much improved as to lessen very greatly the difficulties and insure much better results in the

end. The active interference of the surgeon should begin at such a time as will enable him to have the foot over corrected when the child learns to walk. It is a great disadvantage to allow the child to walk on an imperfectly corrected foot. By so doing the weight of the body acts as the deforming agent, whereas if the foot has been over corrected, the weight of the body and the employment of the foot become means not only to prevent relapse but also to increase the degree of motion. It is useless to have corrected the foot a long time before the child may be expected to walk, as the foot so corrected must be retained in that position by some appliance or fixed dressing.

The employment of mechanical appliances for the correction of this deformity is not to be recommended. With the exception of the coiled spring for correcting pigeon toe, I never employ any mechanical appliance to rectify the deformity. Their use is limited to the time when the deformity has been fully corrected or over-corrected, when they are employed to prevent relapse.

Notwithstanding the fact that so many unsatisfactory results have been obtained in dealing with these cases as to have made them the opprobrium of surgery, yet there are few patients whom we are called upon to treat, where results that are more pleasant both to the surgeon and to the patient are to be obtained. If the parents of a child will follow instructions, and will not grow weary in what is necessarily a prolonged course of treatment, the surgeon may confidently look for such a result as will permit a return to function and form so nearly approaching the normal as to leave no trace of defect to the ordinary observer. The child should not pass from observation as soon as the deformity has been corrected; but should be under the supervision of the surgeou for several years afterward. Though club-foot shoes and other appliances are not to be recommended as means of correcting the deformity, yet their employment afterward is essential to success. The difference between a defective and a perfect result when the patient is seen in after years, depends largely upon the careful management of the case subsequent to rectification of the deformity.

Age is not a serious barrier in the way of treatment. Satisfactory results are obtained in cases who have attained the age of forty years; and there seems no good reason why patients should not have this deformity corrected at even a later time.

14 Bloor St. W.,
Toronto.

1Deformities of the Foot, Walsham and Hughes, 1895.
Hartley—*N. Y. Med. Rec.*, Aug., 1894.
Hoffa—Lehrbuch der Orthopadischen Chirurgie, 3rd Ed, p. 660.
Bradford and Lovet, Orth. Surg., p. 450.
Young, Orth. Surg., p. 325.

2Walsham and Hughes, page 68.

3Ashurst Internat. Enc. Surg., Vol VI., p. 1004.

4Transact. Amer. Orth. Assoc., Vol. V. pp. 164, 220, 232.

5Judson, Trans. Amer. Orth. Assoc, p. 206, Vol. V.

6McKenzie, Trans. A. O. A., Vol. V., p. 203.

7*N. Y. Med. Rec.*, Nov. 29th, 1890, p. 593. *Bost. Med. and Surg. Jour.*, 1892, c. xxvi: p. 308.

8Morton, *Med. News*, July 12, 1890, p. 25.
Lancet, March 16, 1889.
Annals Surg., Aug., '93, p. 248.

SURGERY

IN CHARGE OF

GEO. A. BINGHAM, M. D.,

Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children. 68 Isabella Street.

ON THE MANAGEMENT OF CASES DURING THE PERIOD IMMEDIATELY FOLLOWING OPERATION.

BY SIR THORNLEY STOKER

When I last had the honor of addressing you from this chair, I took occasion to apologize for speaking on a vulgar instead of an obscure or novel subject, and I am again disposed to use my opportunity to a like effect. I do not presume to address myself particularly to the more senior portion of my audience; but there are a large number of the younger members of the Academy present, and to them I venture to say something about a subject which exercised me much in my younger days, which does so still, and which is important because of its very commonness, and worthy of attention because it is sometimes overlooked.

I refer to the management of patients during that often-time critical period between the performance of a surgical operation and the moment at which, the risks consequent on it having passed, the patient becomes free from immediate and non-particular danger. This is the period occupied by two conditions of depression common to any or all operations, and therefore to be considered by themselves, apart from special dangers proper to individual surgical procedures. They are (*a*) shock and (*b*) exhaustion consequent on vomiting.

They may not be present, or being present, may vary in duration from a few minutes to several days. Their intensity cannot be foretold; they may be but slight or may be grave even unto death, and nothing in the condition of the patient, the nature of disease, or the character of operation can afford any reliable evidence as to their possible severity. They may be serious in those who are vigorous, and unimportant in those who are weak; the very young and the aged may suffer from them but slightly, and persons in middle life may be in peril; they may follow the most trivial operation and be absent from the most severe.

Those who have had experience in surgery know how often they meet surprises in the immediate consequences of operation. Sometimes the experience is the pleasant one of finding the treatment borne better than was expected; sometimes it is the sad one of danger following an operation when it was not looked for. The lesson we learn is never to neglect during and after operations every detail which can lessen danger by diminishing the chances of shock or exhaustion, and which can assist subsequent reaction.

The causes which tend to produce shock are numerous, and for the most part obscure. There are many states of enfeebled health, of particular debility, and of other recognized conditions which predispose to it. But there are unseen and often unexpected circumstances which may lend themselves to its production. Operative measures should, therefore, never be approached without the most careful general examination of the patient, and the most thoughtful consideration of his physical position. It is impossible to formulate exact laws in this direction; these perceptions are largely matters of experience, and only time and clinical study can develop them But from long observation we know that such considerations of the general state of a patient about to be submitted to operation are often overlooked or disregarded, and I suppose most of us have had bitter regret of our want of perception.

In addition to general matters concerning the patient there is one particular which is proper to the surgeon, and in which great error is common —I refer to the undue prolongation of operations. Two circumstances have, in our generation, lent themselves to this: one is the facility afforded by the use of anæsthetics; the other, the extreme care, conservation, and attention to detail, begotten by the introduction of antiseptic methods. There is no one circumstance which so tends to the production of shock and to the exhaustion produced by subsequent vomiting as prolonged anæsthesia. I have had this impressed on me by severe lessons, and I am satisfied that we should watch ourselves very closely in this direction, and sacrifice detail and conservative measures in instances where they demand the unsafe prolongation of anæsthesia. I can look back on cases where I regret the time spent on an operation; for instance, the only example of elected operation for the radical cure of hernia which has ever proved fatal in my practice was one in which, in my anxiety to con-

serve the testis in an extremely complicated rupture, I prolonged the dissection to such an extent as to produce shock, from which the boy never rallied. I know now that had I removed the organ, I could rapidly have concluded the treatment and saved the patient.

What I have said of the production of dangerous shock is largely true of exhaustion immediately following operation. Given the conditions, known and unknown, which predispose some patients to it more than others, prolonged anæsthesia, with its often attendant vomiting, is its most usual provocative. We will generally see post-operation vomiting proportionate in severity and persistence to the duration of anæsthesia.

So much for causes of shock and vomiting: what of the means of avoiding them, and of relieving them if they occur? It is a truism to say that prevention is better than cure, and it will be seen from what I have said that a due despatch in the performance of operations, and a consequent shortening of the period of anæsthesia is the most important direct measure to attend to. To an audience like this I need not elaborate this part of my subject; indeed, I could not if I would, for there are a hundred various conditions and circumstances which must guide us, and their knowledge and application are among the matters which make the difference between one surgeon and another, and which lend themselves to our successes or contribute to our failures. Shock and vomiting are so much due to the same causes, and so subject to the same remedial measures, that it is difficult to consider them apart. I have learned to rely on three agents only for the relief of shock: (1) Heat; (2) alcohol; and (3) morphine or opium Concerning the first of these, we generally find that if the surface of the body can, by the use of hot applications, be brought to a wholesome warmth, the danger has been overcome. If to the use of hot water, contained in bottles, or, better still, in small India-rubber bags, we add rubefacient applications of mustard to the extremities, about the region of the solar plexus, or over the heart, we have a valuable armament for the inducement, not only of heat, but also for the production of a physiological stimulation.

If these measures fail, or response to them is too slow, alcohol must be resorted to. It should be given by the rectum, not only because vomiting may exist, or may be induced by the introduction of stimulants into the stomach, but also because when shock is present the stomach has little or no power of assimilation. The possible necessity for rectal stimulation and alimentation after operation is one of the reasons why the bowel should always be thoroughly cleared before any procedure, however slight, in which anæsthesia is to be employed.

Failing by these measures to induce reaction, opium or morphine has to be resorted to. If rapid effect is sought, morphine is the most useful agent, and it is also that which best controls vomiting. But where there is no vomiting, and where the stimulating effect of the drug is our chief aim, opium itself is to be preferred; it must be given by the rectum. No rules can be laid down for the dosage in these cases, beyond the two points that are to be borne in mind: first, that opium is tolerated in large quantities by persons suffering from shock, very much as those bear it who have lost much blood; and, secondly, that it must be given intelligently, that is to say, given watchfully, dose following dose, until the due effect is produced. The value of morphine given hypodermically, or of opium administered by enema in all cases of depression due to shock, cannot be overstated. I can look back on lives lost after operation from shock and exhaustion, which greater clinical experience and more courageous use of morphine or opium would now enable me to save. If it be sought to study the effect of opium as a stimulant, it cannot be better seen than by watching its effects in the shock and collapse following extensive burns. I have to thank the help afforded by modern nursing developments for much wholesome change of opinion in these matters. It has only been since the introduction of trained women to the bedside, with their watchful intelligence and careful skill, that I have learned properly to deal with cases after operation. That intuitive faculty, amounting to what used to be miscalled an "instinct," and which is the special property of women, finds its best expression in the study and management of difficulties like those I speak of.

Of the treatment of the usually more persistent condition of vomiting, with its attendant exhaustion, much need not be added to the limited list of measures employed in the treatment of shock. Warmth, rectal stimulation, and the hypodermic syringe again find their use. If to these I add rubefaction, or occasionally limited blistering over the stomach, I have enumerated all the means I find most excellent. The host of drugs recommended to check vomiting are, in my experience, worse than useless; they are not only ineffectual, but they add seriously to the gastric disturbance. One measure, introduced of late, we are trying in the Richmond Hospital. I mean the use, for some hours after operation, of a mask charged with vinegar. We are not yet in a position to speak definitely about this treatment, but it seems to give promise of success in cases where chloroform has been the anæsthetic. The *rationale* of its action is simple; the chloroform which is exhaled by the lungs is decomposed during expiration into chlorine and formic acid. The chlorine, by its irritation of the trachea and larynx, is probably the cause of vomiting, and being taken

up by the acetic acid, is rendered harmless. But so far as present experience carries us, the hypodermic use of morphine is the cardinal remedy for the species of vomiting of which I speak. It must be used intelligently, fully, and fearlessly, and will exercise its effects both as a stimulant and as a gastric sedative far beyond those of any other remedy.

If it be conceded that it is useless to introduce stimulant or aliment into the stomach of a patient suffering from shock, it will be granted that it is not only useless but improper when vomiting is present; and here a previously cleaned rectum serves its owner well. Stimulants associated with such nutriments as can be readily absorbed should be periodically introduced. It is generally found that vomiting any more than shock does not persist with a warm surface, and therefore the three remedies I haveindicated should be employed in the same sequence as in shock; first, heat; second, rectal stimulation and nourishment; third, morphine.

The distressing symptom of thirst is one which gives great trouble. There is nothing I have learned to discredit more thoroughly for the relief of thirst than ice. It increases thirst both directly and by the induction of vomiting. The emesis it produces is due to the quantity of water the sucking of ice insidiously introduces into the stomach. Nothing should be put into the stomach in these cases, so that ice is not only useless, but hurtful. Thirst is best relieved by frequent rinsing of the mouth with hot water, and by the occasional introduction of two or three ounces of warm water into the rectum.

In what I have said I have avoided speaking of details and methods; I have remembered that, although some of us are younger and less experienced than others, all of us in this room are educated in the factors of surgical science, and I have therefore tried to be suggestive rather than didactic, and to avoid details except in so far as they were necessary to the elucidation of principles.

If I may reduce to formulæ the matters I have referred to, I would put them thus:

1. That the tendency to prolong operations must be carefully guarded against, as it is a grave cause of danger.

2. That in the treatment of shock and vomiting following operation we get no help from the stomach, and must rely on the rectum as its substitute.

3. That heat, alcohol, and opiates are our best remedies; and that the latter are well borne, and must be intelligently used to their full effect.

4. That drugs of the class ordinarily used to check vomiting are of little or no use in the cases under consideration.

5. That ice does not relieve thirst, and does harm by introducing water into the stomach and so provoking vomiting.—*Br. Med. Jour.*

CANCER.

BY EARNEST LAPLACE, M.D., LL D.

I wish, to-day, to give you a few general thoughts on cancer—an affection of such dread to all who are acquainted with it; so difficult to diagnosticate and treat—cancer, the bugbear of the medical student, especially when called on to distinguish between it, sarcoma and other growths. To begin with what we know about cancer. The word cancer means simply a crab, so named by the ancient pathologists from its eating or gnawing. At the present time it means nothing else than an hyperplasia, or excessive development of the cells in a particular part of the body. Now, these cells may either grow on the surface and bulge out or they may grow on the surface and dip into the tissue. According as they do one or the other, they are benign or malignant growths. Let us say, by way of illustration, it began on the surface of the skin in the epithelium. You all have been out rowing, and have noticed how callous your hand would become and how here and there was a "water blister." The oar acts as an irritant to the skin, and a congestion and hypernutrition is the result; the epithelial cells proliferate, accumulate in one spot, and there is a tumor or callus, under which may be found blood-serum, which, being absorbed, leaves the thickened epidermis.

On the other hand, the man is a smoker and smokes a pipe. The pipe always rubs the same spot. That man comes from a family of cancerous ancestors, and has a suitable soil or predisposition to cancer, if the chances are given for an irritant to enter the tissues. The man may have an abrasion on the lip; the pipe irritates it and causes an hyperæmia. Furthermore, there is another element that comes in, and this is a micro-organism. I cannot prove to you that this is the case, nor can I show you the germ, but it is allied to the germs that we know are the cause of other affections. In the case of the thickened epidermis of the hand, and when we have a corn on the foot, we have an irritant acting from without; but in epithelion.a the irritant — a germ—acts in the tissues and causes the growing epithelium to be pushed down, and causes it to infiltrate into the tissues, while in the corn it is simply an accumulation of the epithelial cells on the surface. The ordinary corn or callus is an epithelioma in the true sense of the word, but time and usage have determined us not to call this an epithelioma. Now let us return to our smoker.

The pipe has irritated the crack or abrasion of the lip. The man is of a carcinomatous diathesis; just what a diathesis is we do not know, but he has the chemical condition within him which makes him a suitable soil to develop cancer. Such a condition is tuberculosis, that springs from

grief or exposure. Many thousand people smoke a pipe and do not get cancer, because they do not have the diathesis. As a result of the irritant, the cells proliferate and there is produced a chemical substance called toxin. This increases the irritation on the inside and causes the proliferation to continue. The cells do not accumulate on the surface, but infiltrate into the subcutaneous tissue, muscles and periosteum. These cells proliferate wherever the germs exist to irritate them. Remember, then, that in a corn the irritant comes from without, while in epithelioma the irritant is a germ which acts from within. So much for epithelioma, and this leaves out of consideration a whole class of tumors in which the process is identical, whether on the surface of the skin or beneath it. Laying this aside, let us consider that character of growths presented by fibrous tissue, which includes all fibromata, sarcomata and scirrhous cancers.

The processes of nature are blind, and she acts just as she is forced to act. When we have an amputation, the large flaps are open and a dreadful gap has been made. The surgeon cleanses the wound, renders it aseptic, sews it up and trusts to nature to cure it. All the elements that are concerned in cancer are brought to bear here, and grow and heal the wound. The element that nature puts into a malignant cancer she puts into the process of healing wounds. In a cut or wound, as a result, a clot forms in the mouth of the vessels and checks hæmorrhage. The blood is still being forced into the vessels, and in these vessels are small mouths or stomata against which a white blood cell fits. The cells enter into the stomata and, by an hour-glass contraction, escape from the vessels as leucocytes, giving us the phenomenon of diapedesis. The leucocytes are destined by nature to grow into fibrous tissue by their elongation. When millions of these leucocytes are exuded into the wound, we say it is covered with healthy granulations. These soon fill the wound, and it is found that those which fill the bottom of the wound have become fibrous; above this come the spindle-shaped and on top the round cells. Finally, all that remains to complete the healing is to cover it with epithelium. If, for some reason, the leucocyte had not grown, but had been killed, it would have undergone fatty degeneration and given us a pus cell. You must retain these steps and follow them closely if you wish to get an accurate notion of the development of cancer.

You will find nothing but fibrous and epithelial tissues in cancer, but they are arranged differently from the normal tissues of the body. Sarcoma is a variety of fibroma. Just as epithelioma is a variety due to the growth of epithelial cells, fibroma is due to the growth of fibrous cells. In fibroma there is an exudation of cells from a vessel, which undergo the same changes that they do in the healing of an ordinary wound. If you make sections of a fibroma and examine them with a microscope, you will find cells of different ages, representing the round, spindle and fibrous cell, all in the same tumor. When you find the fibrous cells in excess, it is a fibroma; when the spindle cells predominate, it is a spindle-cell sarcoma; and if the round cells are in excess, it is a round cell sarcoma. A fibroma and a sarcoma are really the same thing, but the sarcoma grows much more rapidly than the fibroma. A fibroma cannot become a fibroma until it has undergone the same process of growth as a sarcoma, only much more slowly.

The carcinoma developes either as the soft encephaloid or hard scirrhus in the glands. Just as we have the epithelioma on the surface, we may have a growth of endothelial cells in a gland, giving us the encephaloid (brain-like) cancer. When the mass is simply composed of endothelial cells with a very small amount of fibrous tissues and without structure, it is the encephaloid. A scirrhus is nothing else than a combination of the encephaloid and fibrous tissue in which the fibrous tissue predominates. It is much harder than the encephaloid, but the process of development is the same. The epithelial cells are inclosed within fibrous cells, forming alveoli.

We next come to consider the mucoid and amyloid cancers. Nature can do nothing more than I have stated, and these cells, growing under abnormal circumstances, die and, being contracted upon by the fibrous tissue, undergo amyloid, mucoid, or calcareous degeneration, giving us these forms of cancer.

Metastasis.—To my mind the very best proof of malignant growths being due to a micro-organism is the element of metastatis—that element by which a growth, if not properly removed, will break out anew in the same or another place, as only one germ is required to develop it. A tumor may be thoroughly removed, but, if a neighboring gland be affected, what can be plainer than that the poison has travelled along the lymphatics and developed? Here is an idea I wish to submit to you that will take away any absolute or stereotyped rule, and that is, when to pronounce a growth benign and when malignant. Why call the one growth benign and the other malignant?

The thickened epidermis on the hand is benign because the irritant that produced it was outside of the body and can be removed. The epithelioma is malignant because it returns; the irritant in the tissue has not been completely removed. There is one more growth and that is the lymphoma. A lymphoma is nothing more than a fibroma in some of whose cells are deposited fat globules. The oil in the cell has simply pushed the nucleus to one side. A fibrous cell does not possess the power of infiltration like the epithelial, and is self-limiting

and movable, as a rule, and benign. True cancer is immovable because it infiltrates.

Here is a man who had epithelioma of the penis that was removed a year ago, and now he comes back with a similar growth in the groin. What I wish to call your attention to is this fact: If you cut into this tumor and prepare microscopical slides from the different portions of the tumor and give them to a pathologist to examine, he will give this report: One section contains epithelial cells all over it. And he would pronounce it an encephaloid. If another section made from the thickened skin were given him, he would say epithelioma of a malignant type. If I cut still farther up he would say sarcoma; and if lower down he would say fibroma. This illustrates the great caution necessary in making a diagnosis. If the glands are involved it is a carcinoma. If the epithelial tissue is involved it is an epithelioma. All these types can be and are present in the same growth.

The nature of a cancer, therefore, depends upon the nature and arrangement of the cells in the particular section examined, remembering that the element of benignity or malignancy simply refers to whether the irritant, which is the cause of the growth, has been completely removed from the system or not.

The therapeutics of cancer is, to say the least, in a very unsettled state. Many as may be the remedies for the local treatment of cancer, these only act by the local destruction of infected cells —at times successfully removing them, while at other times causing an infiltration of tissues by the added irritative process. Hence, the conflicting reports as to the efficiency of all caustics, pastes, etc.

The real and efficient treatment must depend upon altering the nature of the tissues so as to make them resist or in other ways be unsuited to the development of what may be the cause of this disease. Until such a preventive or alterative treatment is found, we must acknowledge that the treatment of the disease is still to us a hidden secret.

The advancing steps of bacteriology and experimental pathology offer the only hope in this direction. Already we have learned by these methods the inoculability of cancer, demonstrating, as it were, positively its infectious nature. And inasmuch as the prevention and cure of other infectious diseases have been found, so must the same lesson bring us to the discovery of what would be a great boon to humanity—the cure of cancer.—*Medical Bulletin.*

COCCYGODYNIA, REMOVAL OF THE COCCYX.—CLINICAL LECTURE.

BY E. E. MONTGOMERY, M.D.

The second patient you also saw one week ago. She presents the following history: She is 33 years of age, married, father and mother living, and in good health. She has three sisters and a brother, all of whom are living and well. She had the common diseases of childhood, smallpox at 11, rheumatism, pneumonia, and grippe. Menstruated at 9, was regular until 12, when she says the flow stopped for two years. After this period she was regular. She was married at 18, and has had seven children, the youngest is 6 years old. Instruments were used during the first labor, when she was badly lacerated, also during the last. She has had one miscarriage. Twelve years ago while working, she slipped and struck the coccyx against the corner of a lounge, which caused a fracture. This united without treatment, but projected somewhat forward. She had a subsequent injury some two years ago, since which she has suffered much distress. The history of this patient is interesting from several points of view. In the first place, she gives a history of menstruating at 9 years of age. This is an evidence of precocity, as women usually do not menstruate until from 13 to 17. It is well to remember, however, that there are cases upon record in which menstruation has taken place during the first year of the life of the individual, and the child at three years of age has been fully developed, showing all the evidences of a developed woman.

Pain in the coccyx is not an infrequent symptom, and may occur as a result of conditions independent of the coccyx itself. In this patient the trouble is undoubtedly due to the injuries she has received, as there is a history of two injuries, and as we introduce a finger into the rectum and move the coccyx with it, we recognize a distinct grating of bone, as if two bare surfaces were in contact. Pain may also arise from an inflammatory condition of the sheath of the muscles attached to the coccyx, or in those of the ligaments, from thickening of the periosteum of the bone, or in some cases as a reflected pain from diseased conditions of the uterus. It is not an infrequent thing to find a patient complains of pain in the coccyx or anus as a result of a retro-displacement of the uterus. So, too, we find similar conditions in what is known as painful metritis, where the cervix is large, heavy, projects backward and is situated low down. Such patients complain of pain in sitting, also in walking, and moving

about. The pain of coccygodynia is felt directly in the bone and in the muscles about it. It may occur from sitting or from walking, or change of position of the patient in bed, so the patient who has had a recent fracture and suffers from inflammation produced by it, may be confined almost to one position, and be unable to change it without giving rise to a great deal of distress. In such cases, the act of defecation is attended with pain. The coccyx is most frequently injured by a fall or blow, in which the person strikes upon some object which impinges directly against the bone. It may be produced, however, in labor, where labor takes place in individuals late in life, after the bone has become more or less anchylosed. The treatment of the condition will depend very much, of course, upon the cause producing it. Thus, if we find it is due to uterine disease, an effort should first be made to counteract and remedy that, in the hope that in so doing, the irritation in the coccyx will be relieved. It has been recommended that subcutaneous incision be made, separating the muscles and ligaments from the bone. The plan of treatment, however, is rather ineffective, and consequently is not frequently resorted to. The only operation in serious cases that affords any certainty of relief, is the removal of the coccyx. This procedure consists in making an incision over the coccyx about one and one-half inches in length, extending from just above its articulation to the extremity of the bone, the lower surface of the bone is laid bare, its extremity is pressed against, rendering tense the posterior common ligament, which is cut through, opening the articulation. Having separated the articulation, we then grasp the bone with a pair of forceps, and usually this can be done by passing them between the bone and the sacrum, and the muscular and ligamentary attachments are cut close to the bone. In doing this in this patient, we have wounded a branch of the middle sacral artery. This is seized with a hæmostat, and we pass the sutures around the surfaces so as to secure this vessel, in the first suture. The lower end of the sacrum was somewhat roughened and bare. I propose to cut a portion of this away with the rongeur and push the periosteum over the extremity. The wound is then closed with sutures, passing the sutures around the entire surface so as to prevent the possibility of the formation of a cavity in which hæmorrhage will occur. Having closed the wound with sutures, we now wash it carefully before coating it over with collodion; place over it some gauze which is also sealed down with collodion. The gauze will be held in place by strips of plaster and a bandage. The catheter will be used for the patient for the first few days, after which she will be directed to lie upon her face to evacuate the urine, in order that in this way the dressing shall not be spoiled. This patient should recover without any unpleasant symptoms and be well at the end of two weeks.—*Med. Fortnightly.*

APPENDICITIS AND RHEUMATISM.—In *The Lancet*, Dr. G. A. Sutherland advances a theory which, if true, may perhaps prove that the constitutional treatment of appendicitis is as important as local and surgical measures. The vermiform appendix is rich in lymphoid or adenoid tissue, which suggests the possibility of its being the centre for the production of leucocytes or lymphocytes. Elsewhere in the alimentary canal the importance of adenoid tissue is fully recognized, and the action of the lymphocytes produced there has been fully explained. According to Berry's researches, the function of the appendix is, (1) leucocyte producing, and (2) secretory. Leucocytes he considers useful in the destruction of micro-organisms and the absorption of proteids. Such protective power would be of great service, for processes of decomposition going on unchecked in the cæcal region would probably result in symptoms of auto-intoxication that would be extremely common. Usually regarded (appendicitis) as a purely local condition, due to such local causes as catarrh, concretion, cystic dilatation, etc., the author thinks it also quite possible that the vermiform appendix may be acted upon by poison circulating in the blood and thus become acutely or chronically inflamed. Rheumatism may be such a poison. The term "abdominal tonsil" has been applied to the appendix; and there are in reality many points of resemblance, both anatomical and pathological, between the tonsils and the vermiform appendix. If the former constitute the "first line of defence for the alimentary canal," the latter may be regarded as the second line of defence. Rheumatism affects adenoid tissue elsewhere. Why not here? While purely local or mechanical causes of appendicitis do exist, there may be others. And, in certain cases, the pathology may be this: The presence of a constitutional poison producing inflammation of the lymphoid tissue in the appendix, depriving it of its normal protective functions, and thus inducing a condition that permits the entrance of micro-organisms and a resulting septic peritonitis or appendicitis.—*Med. Rec.*

ANTITOXIN TREATMENT OF SYPHILIS.—Dr. Vievorovsky has been employing antitoxin serum in the treatment of syphilis, in the Moscow Military Hospital, and claims to have observed most satisfactory results.—*Med. Rec.*

MEDICINE

IN CHARGE OF

N. A. POWELL, M. D.,

Professor of Medical Jurisprudence, Trinity Medical College ;
Surgeon Out-door Department Toronto General Hospital ; Lecturer on Practice of Surgery,
Woman's Medical College. 167 College Street.

THYROID GLAND AND FEMALE ORGANS OF GENERATION.

For a hundred years the thyroid gland has been presumed to be connected by some means with the generative apparatus of females. We hear of Catull and Mercuriales who looked upon the diagnostic measurement of the throat to determine the vaginity or defloration.

In Goethe's epigrams we find similar references made to this diagnostic symptom. Meckel considered the thyroid gland to be similar in many respects to the uterus, while Osiander has written a treatise on the enlargement of the throat during the gravid state.

The accumulated statistics of goître have shown that this disease preponderates in females ranging from 80 to 90 per cent. We also meet with myxœdema, morbus basedowii, more frequently in the female than in the male. The altered condition of the thyroid is forcibly shown in the activity of the physiological function of the genital organs at the time of puberty. Goître has also been observed in early menstrual inauguration and has even been attributed to it ; the transitory swelling of the gland is often prominently noticed at the menstrual period. Wagner has pointed out similar phenomena in the animal creation and affirmed that two-thirds of the cases observed by him had enlargement of the thyroid when gravid. Freund records fifty cases in his practice which he had carefully examined by measurement, and found forty-five of them had increased from one-half to one and a half centimetres. With this increase of the gland we have frequently asthma associated, which sometimes becomes dangerously intense. Wolfler observed a softening of the trachea during pregnancy, and also relates cases where struma in the gravid condition increased, and had to be extirpated. In the etiology of myxœdema the thyroid gland plays an active part. The disease basedowii occurs more frequently in those who have borne children. As has been already observed, the thyroid gland increases during pregnancy and rapidly recedes in volume during the puerperal condition, the latter occuring within twelve or twenty-four hours. A similar change of this kind has been observed in the gravid condition when the person attacked is suffering from morbus basedowii, which rapidly recedes after confinement.

The climacteric period is fruitful in producing atrophy of the thyroid gland although goître is recorded to have often occurred at this period, whilst myxœdema and morbus basedowii are not uncommon. Mathieus had the origin of the diseases in view when he advocated dismemberment by castration and extirpation of the uterus for the radical cure of these diseases.

It is yet undecided whether dysmenorrhœa will produce goître, but it would seem from evidence that when there is a low pressure in the menstrual period the enlargement is reduced. In tubercle the gland is not hypertrophied, and the two are rather opposed to each other. Ländau has shown a seeming connection between dysmenorrhœa and myxœdema. Many theories have been put forward as to the origin of goître, besides the generative apparatus, but in all some connection may be traced. Freund presumed that the connection with the genitals was through the circulation. Another theory is the poisonous condition of the gravid state, which excites the gland, and functionally enlarges it. Buschan considered symptomatic morbus basdowii arose from genital affections, while other authors attributed it to nervous affections. In goîtrous individuals it is assumed that these organs are more excited, and it has been observed in animals that thyroidectomy arrests the development. Steinberg agreed with Fischer in the relation between morbus basedowii and the genital organs, and emphasized the erotic condition. He related a case of morbus basedowii that had greatly improved after confinement. The effects of menstruation on the gland are not so clear. Khane thought that the connection of the gland was more directly associated with chlorosis, as struma parenchymatosum was a usual accompaniment.—Austrian Correspondent, *Med. Press.*

Acne Rosacea.—Doctor Cantrell freezes the part with rhigolene or ethyl chloride, then freely scarifies with a five-bladed knife, *Med World.* He believes this the best treatment, and asserts it gives prompt relief.

THE TREATMENT OF THE NOSE AND THROAT DURING MEASLES AND SCARLET FEVER.

The objects to be accomplished are to thoroughly cleanse the mucous membrane, to render the secretions alkaline, to render inert the bacteria which may be present, and finally to lubricate the mucous membrane and protect it from to rapid evaporation. In cleansing the nares, use a simple one-bulb atomizer, which is coarse and free, in order not to blow a lot of air into the nostrils, or it may be poured from a teaspoon, a dropper, or a Dessar's nasal douche cup. Cleansing solution: Seiler's antiseptic tablet, one tablet; cocaine, four grains, and water two ounces. Oily protective: liquid albolene or hydrastol, a preparation of hydrastis with oil of cinnamon and other aromatics, one ounce; menthol, thymol, or eucalyptol, one grain; and spirits of chloroform, one half drachm. One-half per cent. cocaine may be added by first dissolving it in oleic acid (one grain of alkaloid to the minim of the acid). For acute zymotic coryza of children: eucalyptol, six minims; cocaine, five grains; oleic acid, five minims; chloroform, one drachm, and hydrastol, two ounces; or thymol, two grains; terebene, five grains, and hydrastol, one ounce. For catarrhal laryngitis: chloroform, one-half drachm; menthol, five grains; camphor, ten grains, and hydrastol, enough to make one ounce:—spray down into the larynx several times daily. If a powder is desired as a protective, use the compound stearate of zinc combined with boric acid, ten per cent.; menthol, two per cent.; cocaine, four per cent., etc. If there is a croupous exudate, use peroxide of hydrogen, preceded by a spray of one per cent. solution of cocaine, and followed with an oily protective. For epistaxis, the application of peroxide of hydrogen is excellent. The inhalation of warm, medicated steam is valuable, and one-half to one drachm of any of the following mixtures may be added every two or three hours to the boiling water: tar, one ounce; and alcohol, four drachams. Or: carbolic acid and cresoline, of each two drachms; and eucolyptol and balsam Peru, of each four drachms; Or: gum camphor, one drachm menthol, two drachms; oil pine needles, two drachms; eucalyptol, two drachms; and oil of tar enough to make two ounces. Or: eucalyptol and thymol, of each one drachm; carbolic acid and benzoic acid, of each thirty grains; and terebene, enough to make two ounces.—*Am. Med. Surg. Bull.*

PICHEVIN believes that the curette is of high value, but the more it is employed the more its dangers must be borne in mind.

STORY OF A WOMAN WHO MAKES HER DOCTOR HER CONFIDANT.

This is a story told by one woman, who declared she was an idiot, to a dear friend: You will remember, perhaps, that when I had a touch of bronchitis last winter, we sent for Dr. Payenuff. He called at our house four times, I believe, and after I was comparatively well I visited him at his office three or four times more, and then he discharged me, pronouncing me sound as a dollar. The entire course of treatment did not extend over a period of more than four weeks, but it was long enough to give me a taste of the pleasure there is in having a regular physician. Really, if you've never had the experience, you can't imagine what a luxury he is. He comes high, to be sure, but he is well worth his cost. Well, I staid away two months, and then I trumped up some imaginary ailment, and commenced dosing myself again. That was six months ago, and I have been calling on him regularly once a week ever since. I'm on my way home from his office now.

"When you see how the case stands, you cannot wonder I am disgusted with myself. I am not sick, and he knows it, and he also knows that I know he knows it, but week after week we enact the same farce of counting pulse-beats, taking temperature, spying out, by means of a microscope, a thin white coating on my tongue, and various other little by-plays which are a doctor's stock in trade, for all of which I pay him at the rate of $3 a visit.

"He returns the compliment by giving me some harmless prescription that couldn't hurt a baby. My visits are never prolonged to more than 15 minutes, but during that time I tell him more of my personal history than my husband has learned in the last 15 years. It's strange, but a woman will talk freely to a doctor about things she wouldn' even hint at to any other living being. He knows the exact coloring of every phase of my life. My domestic relations, my social ambitions, artistic triumphs and failures, spiritual welfare and mental peculiarities are alike known to him. Joys and sorrows, secrets of the past, ideas of the present and hopes of the future, which have hitherto been kept inviolate from human knowledge, are spread out before him as an open book.

"And that isn't the worst of it. He doesn't want to hear it. I know he doesn't. Many a time when I have been in the midst of some narrative I have caught him looking at me in such a bored, yet half-surprised way, that I could have bitten out my tonge with vexation, yet I was carried on by some resistless current and couldn't stop for the life of me till I had finished my story.

"I am 36 years old and am supposed to have a fair share of common sense. I have been married

15 years, I have a good-looking husband, and I love him devotedly, but my confidence in him stops at a certain point. Before Dr. Payenuff, however, who is old and homely and crusty, and whom I couldn't even endure were he not a doctor, I lay my soul bare as though he were a Shinto priest and I a young novitiate ready for my first confession. Of course, I am angry with myself. Who wouldn't be? But that is all it will ever amount to. I know now as well as I can know then, that this time next week I will go through the same performance, and will, in all probability, tell him about this very conversation with you. What do you think of me, anyway?"

Her friend laughed.

"You're a goose," she said, "to get roiled up about a little thing like that. Since you have taken the initiative, I will respond by confessing that I am guilty of the same thing. As you said a while ago, a doctor is an indispensable luxury, and every woman who knows her business is bound to have one."

ALCOHOLIC NEURITIS IN OLD AGE.

In the last number of *Brain* Dr. Maude publishes a brief account of a most interesting case. The patient, who was a robust country gentlemen of sporting habits, and used to an out-of-door life, had taken stimulants in considerable excess for at least twenty years. Even eighteen years ago no unusual daily allowance was half a gallon of beer, a bottle of sherry, and eight or ten liqueur glasses of "neat" whisky. His favorite drink was beer, and even in the summer of 1894, although over seventy-five years old, he would often consume two quarts of beer, a bottle of sherry, and half a bottle of whisky in a day. He had had no serious illnesses except broken bones from riding accidents and a fractured humerus at the age of seventy-three from a fall down stairs one evening after dinner. During the year 1894 his great muscular power became much impaired, and towards the end of the year he began to complain of severe darting pains in the left lower limb. A few weeks later the hands and feet began to swell rather suddenly, the skin became thin and glossy, while there were small ecchymoses over it. A similar condition was present on the insteps of both feet, while the calves and thighs were œdematous and the muscles shrunken. The knee jerk could not be elicited, and the pupils were small and did not react to light. The heart sounds were somewhat feeble, but they were regular, and there was no sign of dilatation. Without any previous marked change in his symptoms he died suddenly after a few minutes' dyspnœa about two months after the onset of the symptoms. Dr. Maude considers the case to have been one of peripheral neuritis, and directs attention to several interesting points, such as the advanced age of the patient, the excess of his alcoholic indulgence, and the absence of mental change; the fact also that he was essentially a beer-drinker is interesting, with reference especially to the views of the late Dr. James Ross as to the kind of alcoholic beverage most likely to produce neuritis.—*The Lancet.*

THE MIGRATION OF THE CROTON BUG (ECTOBIA GERMANICA).—In the last number of *Insect Life*, Mr. L. O Howard reports upon the peculiarities of migration of certain water-bugs in our Southern cities, whereby new houses are suddenly overrun. The following observation was made at Washington, D. C.: One dark and drizzly day, late in 1893, a friend came to me and stated that he had just seen a remarkable sight on D Street, near the Department grounds. A vast army of cockroaches, according to his story, was crossing the street. A few hours later I visited the spot and found that the bulk of the army had disappeared, but that many stragglers still remained. According to the statement made to me, the army issued from the rear of an old restaurant fronting upon Pennsylvania Avenue, and marched across the muddy street, undeterred by pools of water, ash heaps, and other barriers, directly south to the front of the building opposite.

This building was a machine shop, and at the direction of the foreman several of the men took brooms and swept back the advancing horde. They swept until their arms were tired, but were unable to stem the advancing tide. The foreman then directed that a line of hot ashes from the furnace be laid along the brick sidewalk. This proved an effective barricade. The foremost cockroaches burned their antennæ and their front legs and the army divided to either side and scurried down into the area ways of adjoining buildings in which they disappeared. The march is said to have continued for two or three hours and many thousands of the insects crossed in this way. A moment's glance, after arriving at the spot, showed me that the insect was the croton bug and that nearly all of the individuals were females carrying egg cases.

I called at the restaurant and found to my surprise that no house cleaning had been going on, and that no especial effort had been made by the application of insecticides to rid the establishment of the roaches.

It seems then to have been a true migration, a development of the true migration instinct in the croton bug. The restaurant had become over populated, perhaps not for its actual denizens but certainly for the thousands of about-to-be-born young. The maternal instinct originated the migratory instinct and the army by one common

impulse started on its journey for more commodious quarters. The darkness of the day is significant, and there is no reason to suppose that similar migrations do not frequently occur but undoubtedly under ordinary circumstances at night. This is the way that new houses become infested.—*Jour. Am. Med. Assoc.*

TREATMENT OF SMALL-POX BY EXCLUSION OF THE CHEMICAL RAYS OF DAYLIGHT.—In September of last year Dr. J. Moir, drew attention in our columns to this treatment of small-pox, and we have since received communications on the subjectfrom Dr. Moir, Dr. Finsen, and Dr. Feilberg. Dr. Finsen has recently published an interesting historical account of the Red Light Treatment of Small-pox, the scientific basis on which it is founded, and the method of carrying it out. Dr. Feilberg states that he was at first very sceptical as to the influence of red light on small-pox patients, but nevertheless, tried its effect on several unvaccinated children suffering from small-pox, and was surprised at the favorable course which the disease took. The vesicles did not suppurate, there was no secondary fever, and no permanent pitting resulted. The essential point for the success of this treatment, according to Dr. Feilberg, is that the patients should come under treatment during the early stage of the disease, shortly after the vesicles have appeared; if the seventh day has been reached suppuration can hardly be avoided. Another important point is that the exclusion of the chemical rays of daylight must be complete and continued until the vesicles have quite dried up. Dr. Moir, whilst admitting that Dr. Finsen bases his treatment on a scientific basis. and notwithstanding the extreme ability displayed both by him and Dr. Feilberg and the care and fairness shown by them in their papers, is still doubtful as to whether their explanations are correct. He admits that he criticises without experiment, but though he has not used identical treatment yet he has given trial to somewhat similar experiments. For instance, he used to employ a solution of collodion and castor oil on the exposed parts to prevent suppuration and pitting, also, for similar reasons, iodine and glycerine solution, the latter particularly apparently meeting Dr. Finsen's chief requirements; but as the result of these and similar trials he still believes that the only distinction to be depended on as to the extent of suppuration and pitting is the presence and quality of the successful vaccination.—*Lancet.*

TREATMENT OF ACUTE BRONCHITIS OF INFANCY.—Dr. Perrier directs that in the very acute forms of bronchitis in children the chest should be rubbed with oil; warm drinks should be given, particularly hot milk. Sometimes, if there is much oppression, it is well to apply a thin and light but mild mustard plaster. If the stomach is loaded with partially digested food an emetic of powdered ipecac, 1 to 2 grains, and syrup of ipecac, 1 ounce, may be given, in the dose of a teaspoonful every ten minutes till the desired effect is produced, and if the fever is high 1 or 2 grains of the hydrochlorate of quinine may be given in a little coffee. The air of the room should be moderately warm and moist, but it is most important that the ventilation be good. As the disease progresses, if bronchial secretion becomes very profuse, the following prescription may be used:

℞—Oxide of antimony. . . . . gr. ss.
Syrup of senega. . . . . ʒ j.
Syrup of acacia. . . . . ʒ ij.
M. Sig. A teaspoonful every two hours.

Or this may be replaced by

℞—Terpine hydrate. . . . . gr. ij.—iv.
Brandy. . . . . ʒ ij.
Syrup of cinchona. . . . ʒ ss.
Syrup of orange. . . . . ℥ ij.
M. Sig. A teaspoonful every two hours.

Often an emetic will aid in relieving the lungs of mucus. During the day a little additional brandy or red wine may be given as a stimulant. In those cases in which frequent attacks of bronchitis follow one another it is useful to give the child warm baths, followed by cold sponging, and this, in turn, by active friction of the skin in drying the body. Malt extract should be given with each meal, and a teaspoonful of the following prescription ordered three times a day:

℞—Arsenate of sodium, ... gr. j.
Distilled water. . . . . ʒ vi.
M. Sig. A teaspoonful after meals.

If, notwithstanding these measures, the child fails to improve, it must be taken to a dry climate. —*Therapeutic Gazette.*

GRIEF FROM A MEDICAL STAND-POINT.—The nervous system requires complete rest after blows caused by sorrow. Recent medical observations show that the physical results of depressing emotions are similar to those caused by bodily accidents, fatigue, chill, partial starvation, and loss of blood. Birds, moles, and dogs, which apparently died in consequence of capture, and from conditions that correspond in human beings to acute nostalgia and "broken heart," were examined after death as to the condition of their internal organs, and it was found that the nutrition of the tissues had been interfered with, and the substance proper of various vital organs had undergone the same kind of degeneration as that brought about by phosphorus or the germs of infectious disease. The poison of grief is more than this to a man. To urge work, study, travel, the vain search for amuse-

ments, is both useless and dangerous. For a time the whole organism is overthrown, and temporary seclusion is imperative for proper readjustment. Grief cannot be ignored, neither can it be cheered up. It must be accepted and allowed to wear itself away. Readjustment comes slowly. Sorrow, grief, and all great misfortunes should be regarded as conditions similar to acute infectious diseases, which they resemble in result; and, later, as convalescence from such diseases. Seclusion, rest, sleep, appropriate food, fresh air, sunshine, interests that tax neither mind nor body, these are requirements in this case of illness.—*Charlotte Medical Journal.*

THE MICRO-ORGANISM OF MEASLES.—Joseph Czajkowski (*Centralbl. fur Bakt. und Parasit.*), again contributes a further addition to our knowledge of the bacillus which he previously described as existing in the blood in measles. The bacilli in the blood vary in length from one-half micromillimeter to the diameter of a red blood-corpusle, and in cultures grow into long threads. They stain well with all the aniline dyes, and in the longer forms a part of the protoplasm often remains unstained. They lose their stain by Gram's method. They grow best in bouillon or sterile serous fluid from the abdominal cavity, in which a whitish, fairly heavy sediment is formed, which in older cultures becomes yellowish-gray. The cultures have no characteristic odor. Rabbits were always immune to the bacteria. Mice died from septicæmia three or four days after inoculation with small quantities of the culture, the bacilli being obtained again in pure cultures from the liver and spleen.

The author believes the bacillus described by him to be the specific cause of measles.—*Medicine.*

THE BIBLE AS A CARRIER OF INFECTION.—An amusing incident is reported in the *Lancet* as occurring recently in a Sussex Police Court. The Rector of Graffham and East Lavington, the Rev. Rowley Lascelles, was concerned as witness in a trespass case which was heard recently before the Petworth magistrates, Major Sir Walter G. Barttelot, Bart., being in the chair. Mr. Lascelles asked to be sworn in the Scotch fashion, whereupon the following colloquy ensued:

The Chairman.—I should like to know, Mr. Lascelles, why you, a clergyman of the Church of England, object to kiss the Book?

The Rev. R. Lascelles.—I have a strong objection to kissing the Book in these days of infectious diseases. I should be happy to kiss it if I may turn it inside out.

This was done, and Mr. Lascelles having been sworn in the usual fashion, the chairman went out of his way to remark in an undertone: "He is afraid of catching an infectious disease from the Bible." A later witness when he was sworn, piously remarked: "Although I am only a lay man, I am not afraid of catching infectious diseases from the word of God." The *Lancet* suggests that if certain combinations of words and letters are a safeguard against contagion, we would better drop isolation and return to the use of phylactives. The pious gentlemen who thought the parson showed a want of faith, would probably have been themselves unwilling to kiss a French novel in an equally filthy conditton, but the idea of contagion being carried by a Bible! How preposterous!—*Boston Med. and Surg. Jour.*

SUBSTITUTION.—Dr. C. F. Tucker, of Syracuse, N. Y., January 9th, 1896, writes: Some time ago when I was doing a country practice at Jordan, Onondago County N. Y., I wrote Messrs. Battle & Co. that I could not get the uniform results from bromida that I had previously. They sent me a 4 oz. sample and that was all right, and I still have on hand a little of that particular sample.

The party who had dispensed my prescriptions, after I had expressed my opinion very strongly confessed that he had purchased a considerable quantity of a mixture at less price, said to contain exactly the same ingredients, and had been dispensing that when bromida was prescribed.

After that I had no more trouble, and I can truthfully say that you can find it in my emergency case, office, and in my regular "grip" always, and I have never seen anything but perfect satisfaction attending its use, and I have given it to patients of all ages and about every condition.

I have used it in the last stages of pulmonary tuberculosis, and in severe cases of chronic bronchitis, in delirium tremens, etc., and I always use it when I want a certain hypnotic.

I have used it in doses from two minims up to two and three drachms. It is one of the mixtures of so-called treacherous chloral that never, thus far, caused alarm. I have been familiar with bromidia since away back in the 80's, when I was a clerk in a drug store, and since I have been practising, I still regard it as a reliable old friend, and so it has proved on many occasions.

THE *Youth's Companion* of Feb. 13th publishes an unusually valuable article for young men, by the Lord Chief Justice of England, on "The Bar as a profession." Sound advice, taken from a long and varled experience, and wise encouragement are given to young and prospective lawyers. It is as readable as a story, yet will bear careful study. Each issue of *The Companion* contains one or more articles of exceptional value, written by the ablest men and women of the age.

NOSE AND THROAT

IN CHARGE OF

J. MURRAY McFARLANE, M. D.,

Laryngologist to St. Michael's Hospital. 32 Carlton St.

RHINOLOGICAL DON'TS.

WHAT NOT TO DO IN NASAL AFFECTIONS.

Don't speak of nasal catarrh as a disease. It is a symptom of irritation of the mucous membrane lining the nasal cavities, and has various causes.

Don't make a diagnosis without a careful anterior and posterior rhinoscopic examination.

Don't forget that the nose is meant to breathe through, and that complete or partial obstruction means mouth breathing and all its dangers.

Don't fail to examine the nasal cavities in all cases of asthma, hay fever, deafness, and chronic cough.

Don't forget to cleanse the nasal cavities before making an examination or medicinal application. Medicated sprays or insufflations into the cavities lined with inspissated mucus are applied to the mucus and not to the membranes lining the cavities.

Don't forget that all diseased conditions of the nasal mucous membrane will sooner or later produce middle ear disease; and that they may produce asthma and other reflex affections.

Don't permit a patient to use cocaine under any circumstances.

Don't use cocaine except for diagnostic or operative purposes.

Don't forget that a five per cent. solution of antipyrine will contract the blood vessels, that its action is prolonged far beyond that of cocaine, and that the patient will never contract the cocaine habit by using it.

Don't use cocaine in acute rhinitis. An antiseptic cleansing solution, followed by a spray of five per cent. solution of antipyrine, and small doses of quinine and belladonna internally, is the treatment indicated.

Don't use irritating applications to the nasal mucous membrane in hypertrophic rhinitis. Cleansing is of the first importance in the treatment of this condition.

Don't forget that cleanliness in the *sine qua non* in the treatment of atrophic rhinitis. If it be neglected, all other treatment will fail.

Don't fail to operate and restore the calibre of the nasal passages in all cases of stenosis causing total or partial obstruction of nasal respiration.

Don't hope to relieve catarrhal symptoms if stenosis exists, unless you correct the stenosis.

Don't treat chronic hypertrophy of the tissues covering the turbinated bones with astringents. Destroy a portion of the tissue with the galvanocautery if the hypertrophy is anterior. Remove it with the Jarvis' snare if it is posterior.

Don't treat hypertrophy of the turbinated bones with the cautery. Remove a portion of the entire length of the bone with a saw if the interior is affected; with the wire écraseur if the middle is affected.

Don't use force in using a saw. Simply guide it and allow it to do the cutting.

Don't fail to open an abscess of the septum at the earliest opportunity. You may thereby prevent destruction of the cartilage and deformity of the nose.

Don't remove polypi with the forceps. Use a wire écraseur and cut through the pedicle by turning the screw. Don't pull.

Don't straighten a deflected septum by fracturing and replacing until you have prepared the nasal cavity on the concave side for the encroachment on its calibre. The inferior turbinated bone on this side is generally hypertrophied; in which case a portion of its entire length should be removed.

Don't be in too great haste to plug the nose in cases of hæmorrhage after. The most copious hæmorrhage will usually cease within fifteen minutes.

Don't attemp to arrest epistaxis not due to traumatism by astringent injections. Find the bleeding point and touch it with the galvanocautery.

Don't forget to examine for adenoids in the pharyngeal vault by introducing the finger through the mouth up behind the soft palate.

Don't attempt to treat adenoids by astringents or caustics. The Gottstein curette and the Quinlan forceps will remove them thoroughly. The finger of the operator, introduced behind the soft

palate into the pharyngeal vault, will not only locate accurately the smallest growth, but will determine when all are removed. Don't leave the smallest particle behind.

Don't neglect the tonsils in cases of mouth breathing pointing to nasal obstruction. If they are enlarged remove them with the guillotine or destroy them with the galvano-cautery.

Don't neglect constitutional treatment in syphilis of the nose. Tertiary syphilis, the form usually met with, requires large doses of the iodide. Locally, the best treatment is iodoform in spray.

Don't rely exclusively upon topical means in treating affections of the nose. Tonics are alwsys indicated when the general system is at fault.—*Texas Med. Jour.*

Intra-laryngeal Injections in some Diseases of the Larynx and Bronchi.—Dr. Adolph Bronner says that local remedies most readily cure disease of the mucous membrane of the larynx and bronchi, and also relieve the irritation and cough. We know that large quantities of nearly any non-irritating antiseptic fluid can be safely injected into the bronchi, and that it is readily absorbed there. A menthol solution not only relieves the cough, but has also strong deodorizing and antiseptic properties. The author generally uses a 5 to 20 per cent. solution in paroleine. If about 20 per cent. of water or rectified spirits is added, and the solution well shaken before use, it mixes with the secretion in the bronchi much more readily. When the expectoration is very offensive and copious, he adds 10 to 50 per cent. terenene or 2 per cent. oleum pinentæ, or 3 per cent. europhen. In cases in which there is not much secretion, 2 or 3 per cent. of bicarbonate of soda or boric acid, or 3 to 15 per cent. of tincture of iodine may be used. In cases of purulent bronchitis or bronchiectasis, several injections may be made at one sitting. It is well to precede the first few injections by the application of cocain solution. In aases of bronchitic asthma, menthol is likely to cause great irritation. It is important that the first few injections should cause as little incovenience as possible, or the patient will not call again. The patient is told to take a few deep inspirations and then to say "ah." The syringe is then introduced and the fluid injected. By pointing the end to one side or the other we can inject the fluid into the right or left bronchus. The solution should be kept in Pasteur flasks, or thin glass bottles, and thoroughly sterillzed. Most of the cases that the author has treated, have been of laryngeal disease, chiefly tubercular or atrophic laryngitis.—*British Medical Journal*, October 26th, 1895.

Nasal and Past-Nasal Catarrh.—J. Bennan, M.D., Washington, D. C., (Archives of Pediatrics) says: "I have always followed the advice given by Henoch to treat the nose of an infant, even if it should be only a few days old, if it has a cold in the head and does not breathe perfectly, with a two per cent. solution of nitrate of silver applied with a brush. There are, no doubt, other agents which will also give satisfaction, but the nitrate of silver solution has always proved absolutely inoffensive, even with the youngest babies. Care must be taken, of course, not to have the brush overloaded with the fluid, so that it can drop into the larynx."—*Alkaloidal Clinic.*

The Relations Existing Between the Sexual Apparatus of the Female and Affections of the Larynx.—A 31 year old women, with extensive tuberculosis of the mucous membranes, becamo so short of breath as to demand a tracheotomy. At the last moment, the operation was posponed, on account of abortion. Eight days later, the patient breathed easily, and the swelling of the membrane had completely receded.—*Rev. de Laryngol.—Centralblatt f. Chirurgie*, No. 43, 1895.

Tuberculosis of Larynx.—Thost, in the *Monatschrift f. Ohrenheilk.*, February, 1895, reports six cases of spontaneous healing of laryngeal tubercular ulcers in patients in whom the hereditary and personal histories had given a favorable prognosis. The following is a clipping from the *Medical Week:* By experiments on patients in the wards of Dr. N. Simanovsky, professor extraordinary of laryngology at the Military Academy of Medicine at St. Petersburg, Dr. A. Spengler has ascertained that parachlorophenol (*The Medical Week*, 1894, pp. 330 and 552) is an excellent remedy in the treatment of tuberculosis of the larynx. Of twenty-six patients suffering from this affection who were treated by chlorophenol, ten recovered completely and in the others there was more or less marked improvement.

In Acute Cystitus—

℞.—Potass. citratis, ... 4 drs.
Sp. chloroformi, ... 2½ drs.
Tr. digitalis, ... 80 drops.
Infus. buchu, ... ad. 8 ozs.

Sig.—Two tablespoonfuls three or four times a day (Fothergill). The following suppository may be introduced high up into the rectum:

℞.—Iodoformi, ... 1 gr.
Ext. hyoscyam, ... 1 gr.
Ol. theobromæ, ... 14 grs.

M. et ft. suppos. j.

—*London Med. Times.*

OBSTETRICS AND GYNÆCOLOGY

IN CHARGE OF

J. ALGERNON TEMPLE, M.D., C.M., M.R.C.S., Eng.,

Professor of Obstetrics and Gynæcology, Trinity Medical College;
Gynæcologist Toronto General Hospital; Physician to the Burnside Lying-in Hospital.
205 Simcoe Street.

COMPLICATIONS OF LABOR OCCASIONED BY OPERATIONS FOR THE FIXATION OF THE UTERUS.

Attention has recently been called to complications of labor in cases in which the uterus had been suspended by adhesions following abdominal section, or after suture of the uterus to the walls of the vagina. Among the most recent and interesting of these communications is that of Graefe (*Monatsschrift fur Geburtshlufe und Gynakologie*, 1895, Band ii. Heft 6). The patient was aged thirty-eight years, and a multipara. She was brought into the clinic because of prolapse of the cord and death of the child *in utero*. Upon examination the uterus was found firmly contracted upon the child, and danger of rupture of the uterus threatening if attempt at version had been made. The patient had been operated upon for suspension of the uterus following the removal, by the vagina, of a subserous myoma. In view of the condition present, the abdomen was opened and the uterus amputated, the stump being left at the lower end of the wound. The patient died an hour and a half after operation. On post-mortem examination the anterior wall of the uterus above the internal os was found adherent to the vagina. The right broad ligament was very greatly stretched, and contained a rupture which opened the pelvic cavity into the vagina. Through this rent fatal hæmorrhage had occurred.

Graefe also reports the case of a patient, a multipara, in whom a dislocation of the uterus could not be successfully treated by a pessary. The uterus had been fixed to the vagina in accordance with Mackenrodt's method. The fœtus was in transverse presentation, the wall of the uterus greatly thinned, and the fœtus very plainly to be felt. The condition seemed favorable for a rupture of the uterus; in addition, the patient was seized with eclampsia, and had several convulsions. The abdomen was opened and the child removed; the uterus closed by suture. Both mother and child recovered.

In the *Archives de Tocologie*, 1895, No. 11, Goubaroff reports the case of a patient who had been operated upon for retroversion of the uterus by anterior suspension. Her fœtus was in transverse presentation, and labor was impossible without assistance. To avoid the danger of rupturing the uterus it was determined to deliver the child by Cæsarean section. On opening the abdomen a band of adhesion was found between the uterus and the inner surface of the anterior abdominal wall. The veins of the broad ligament were very greatly enlarged. The child was readily removed and the uterus closed. Very firm adhesions were found between the uterus and the interior wall of the abdomen. The operation was successful in saving the lives of mother and child.

In the *Monatsschrift fur Geburtshulfe und Gynakologie*, 1895, Band ii. Heft 5, Mackenrodt discusses the influence which suspension of the uterus has upon labor. He finds that the most firm adhesions develop between the uterus and the wall of the vagina, holding the uterus in a pathological anteflexion. A normal pregnancy and labor are only possible when the adhesions following the operation gradually loosen spontaneously. If this is not the case, abortion will occur, or a critical condition develop during labor, threatening rupture of the uterus, with loss of mother and child. Should pregnancy and labor be successfully endured, it is very probable that the retroflexion would again develop. In cases where the uterus has been brought by operation into marked anteflexion, the tubes are usually forced downward and backward, and becoming pathologically adherent, conception is less likely. It is a better operation to suspend the uterus by vaginal fixation, because it is possible for the adhesions to loosen spontaneously more easily, and danger of hæmorrhage and sepsis is less. These remarks apply especially to vaginal fixation of the uterus through the fundus.

When, on the contrary, vaginal fixation is performed through the interior of the uterus, the conditions are more favorable for future conception and normal pregnancy and labor.—*Am. Jour. of Med. Sciences.*

Surgical Treatment of Cancer of the Breast.—Sanderson says: It is a matter of fact that efferent lymphatic vessels run from the axillary glands through the apex of the axilla into the posterior triangle, and, after forming connections with the glands therein, finally enter the thoracic duct on the left side and the right thoracic duct on the right side. Moreover, superficial lymphatics from the skin covering the mamma track up over the clavicle to these same glands in the posterior triangle. It is laid down that in primary malignant disease of the breast the axilla should be cleared out (after removal of the breast), whether the glands be visibly infected or not. Why? Because the fact that they are not affected macroscopically is no proof that they are not affected microscopically. And yet, in the face of the anatomical facts quoted above, it is not the usual custom or practice to go further. If it is wrong to assume that the axilla is free from disease because it shows no sign to the naked eye or finger, it is equally wrong to assume that the posterior triangle has escaped. If it is right and peremptory to clear the axilla, it is also right and peremptory to clear the posterior triangle. Still more is it inconceivable how the triangle can be left untouched if the axillary glands are found to be clearly affected at the time of operation. It may possibly be objected that it is not feasible or is difficult to clear the posterior triangle. To this it can be replied that by a flap operation, done a week or ten days after the primary operation, a clean dissection can be made of the whole posterior triangle, that it is not difficult, and that it is quite feasible. A flap formed by a long incision down the sterno-mastoid muscle meeting an incision along the clavicle is detached as far back as the anterior border of the trapezius; this exposes the triangle, and the contents can be systematically removed with a little care and patience. By such means the acknowledged principle would be carried out as far as possible, and if the principle is right it seems incumbent upon the surgeon to strive to apply it thoroughly in practice and not to be content with stopping half-way.

The Extravasation of Blood in Tubal Pregnancy.—James Oliver states that during the evolution of a natural pregnancy there results not only an augmentation in the size of the blood vessels of the uterus, but a hypertrophy of the tissues of this organ generally. When, however, the fecundated ovum develops in the Fallopian tube it seldom happens that any vigorous local growth is excited by its presence, although the blood vessels in the involved tube become greatly enlarged. Apart from any intrinsic disease, the integrity of a blood vessel depends greatly upon the manner in which it is supported by the surrounding tissues. When, therefore, the pressure exerted by the Fallopian tube against a growing ovum is insufficient to support the correlatively enlarged blood vessels, they rapidly become thinned, and rupture with extravasation of blood takes place on the slightest provocation. When the developing ovum is located in the cavity of the uterus we are accustomed to believe that accidental hemorrhage from the maternal vessels never takes place until after the fourth week of pregnancy. Whether this belief be correct or not, it is evident that in tubal pregnancy accidental hemorrhage from the vessels in the mucous lining of the Fallopian tube may occur as early as the seventh or the tenth day after impregnation. In ectopic pregnancy, therefore, blood may be extravasated from the maternal vessels before the chorionic villi become vascular—a phenomenon which happens during the third week of pregnancy when the chorion becomes incorporated with the allantois. The paroxysmal attacks of severe pain which are sometimes experienced in cases of tubal pregnancy are due to these effusions of blood, and, although the primary hemorrhage occurs always whilst the ovum is living, subsequent hemorrhage may nevertheless happen after this body has died. Rupture of the Fallopian tube itself, which has gradually become more and more thinned, may be induced by the first or any succeeding extravasion of blood; and as this accident may occur as early as the fourth week of pregnancy, before the chorionic villi have begun to participate in the formation of a true placenta—for the ovum is everywhere placental at this period—the breach in the continuity of the tube is not, in all cases at least, attributable to a thinning at the placental site or to a penetration of the tube by the villous processes. A portion of the external hemorrhagic discharge—vaginal—which is observed in the early days of some tubal pregnancies comes directly from the ruptured vessels in the tube.

Delirium after Gynæcological Operations.—Doleris (*Nouvelles Archives d'Obstet. et de Gynec.*) has prepared an instructive memoir on the appearance of acute more or less maniacal delirium after "minor" gynæcological operations and plastic surgical proceedings. In one case no operation was performed, but the patient worried continually about surgical relief, till a maniacal attack came on. Two fatal cases occurred in Doleris' experience. In both the patient was vicious, plethoric, alcoholic, and syphilitic. One was very rich and luxurious; she took great quantities of ether. After an operation from the uterine side for the cure of suppurating tubes, violent delirium set in with icterus and no fever. Death occurred on the sixth day; complete asepsis was proved at the necropsy. The second patient was a servant at a beershop. Very large sclerosed ovaries were removed. Fatal delirium ensued; neither vomit-

ing nor fever were observed. In six instances the patient recovered. The curette and dilator, etc., were used in one for diseased appendages, after Doleris' principles. There was delirium for a few days. The same phenomenon was seen in a patient on whom he operated for prolapse and cystic cervicitis, and on a third also treated for these affections; this case was alcoholic. In a case of procidentia, the patient being 52 years old, symptoms of melancholia had been seen before a plastic operation for procidentia. Afterwards she was troubled for a time with acute delirium and ideas of persecution, etc. A nervous young Syrian woman had fits of violent fear after an operation on the cervix. Lastly, a stout phlegmatic woman had acute delirium and insomnia after an operation for prolapse. No other neuroses of the kind have been noted by Doleris in the course of about 2,000 similar operations.—*Br. Med. Jour.*

MEDIEVAL GYNÆCOLOGY.—Dr. W. S. Robertson gives (*Edinburgh Med. and Surg. Jour.*) the following description taken from the works of Father Mayster Alexis, of Pimont, who lived in the latter part of the sixteenth century. The tampon and postural method were evidently well known at that time: "To heale a woman that has the matrice out of her natural place. Take a flint stone that hath been alwaies in the earth and not taken the aire, and put it in some basket covered in a great fire, and when it is verie hotte put it in a little tubbe or barrell, and wet it with vinegar cast upon it, and cause the woman to stand over it to receive the smoake or parfume of it, and then let her goe to bed. Ye shall after this take the juice of Rue and make a little rounde ball of cotton, whereunto ye shall tie a threede, and then dippe the said ball in the saied juice of Rue, and put it into the mouth of the matrice, the whiche will incontinent take the ball and drawe it in, and then it will return into his natural place again. But you must binde and tie the ball sure and well, least peradventure it should remaine within. After this an ointment is to be applied to the reynes of her backe, and laye hotte towe upon it, and then swaddle her as women do young infantes. And so she must be laied *in her bed with her bellie upwarde and her heade lower than her buttockes.* This must ye doe from night to night three times, and she shall be healed. She must also eate hot things in operations, as pigeons and hennes, with spices and other like things.—*Med. Rec.*

BLEEDING FROM VARICOSE VEINS OF THE VAGINA AND VULVA AS A COMPLICATION OF LABOR.—Thiele (*Deutsche medicinische Wochenschrift*, 1895, No. 50) reports the case of a multigravida who was seized with hæmorrhage from the vagina. On examination the source of bleeding was found to be varicose veins in this region. The hæmorrhage became severe, and was checked with the application of ice and iodoform-gauze tampon. Repeated transfusion of saline solution was also practised. The patient came into labor, and was delivered spontaneously of a dead child. Profuse bleeding from the vagina and urethra occurred. The patient made a slow but uninterrupted recovery.

He also reports the case of a multigravida with valvular heart-lesion, who was taken with severe bleeding from the varicose veins of the labia. While the midwife in attendance was cleansing the patient the left labium ruptured, and profuse hæmorrhage followed. The child's head was perforated, and at once extracted during very severe hæmorrhage. Bleeding continued until the uterus was completely emptied. The ruptured veins were then closed by suture, and the patient made a prolonged recovery.

DELAYED PUERPERAL INFECTION. — Doléris points to the established fact that the bacilli of infection may be temporarily innocuous until some incident again arouses their former virulence. Thus it comes that an infection which has been latent for weeks or months suddenly flares up with surprising intensity. He refers to cases of mild puerperal infection which during the puerperium gave either very slight or no symptoms at all. Weeks later, owing to some influence unknown, the latent bacteria are again aroused to activity and produce serious symptoms of puerperal infection. Infection may also occur some time after labor or puerperium, which may still have a puerperal character, because the sexual organs have not regained their former condition and still possess a special morbid receptivity.

A CONTRIBUTION TO THE PHYSIOLOGICAL ANATOMY OF PUERPERAL ECLAMPSIA. — The various organs of two cases of eclampsia were subjected by Leusden to a minute microscopical investigation. He gives his results as follows: I have found nothing which indicates the infectious (bacteria) origin of puerperal eclampsia. The probability is that a toxic substance circulating in the blood is the cause of the eclamptic attacks. The changes in the kidneys are the principal organic lesions. The placental giant cells which are found in the lungs are neither a cause nor a result of eclampsia. The embolism of these cells is only an accidental coincidence. Even the most careful searching failed to show emboli containing liver cells. The minute necrotic changes in the parenchyma of the liver, present in both cases, could not be connected with the cause of eclampsia. The hyaline (fibrous) thrombi of the lung and liver capillaries are the result of secondary changes (uremic?) which occur independent of eclampsia.

TOTAL ABDOMINAL HYSTERECTOMY. — Richelot *(Presse Med)* advocates complete abdominal hysterectomy for uterine fibroids, as operations in which a pedicle or stump is left have many disadvantages—for example, hæmorrhage from or suppuration round the stump. He operates as follows: After the uterus has been pulled out through the abdominal wound, the next procedure depends on the number and position of the fibroids. If they are numerous or contained in the lower segment of the uterus, it would be folly to attempt to place forceps on the distorted broad ligaments. In such atypical cases he practices a preliminary removal of every fibroid which is in the way. Those with a pedicle are cut off with scissors, the interstitial ones enucleated, and lastly, the large fibroids in the lower segment are eucleated or emoved piecemeal through a median incision. The uterus then becomes flaccid, and can be raised out of the true pelvis, while the broad ligaments can be depressed at will. The hysterectomy proper then begins. Standing at the woman's left side, he opens the anterior cul-de-sac, guiding the incision by the finger of the right hand in the vagina. There is no danger of infection if antiseptic precautions are taken. The advantages of opening the anterior cul-de-sac alone are (*a*) the tumor need not be pulled forward; (*b*) there is no dissection of or bleeding from the posterior edge of the vagina; (*c*) saving of time. Next, large curved pressure forceps, such as are used in vaginal hysterectomy, are applied to the broad ligaments by the following method, which is said to be very easily carried out. Standing at the woman's right side he makes a narrow opening with blunt-pointed scissors in the broad base ligaments, close to the cervix and just above the vaginal insertion. This is well above the ureter. The forceps are then introduced *per vaginam*, and their posterior blade is made to pass through the opening made in the broad ligament. They can then be passed upwards and made completely to grasp the ligament with the uterine artery, which are never too high to reach if the inferior segment is free, or if a preliminary enucleation has been practiced. This done on each side the uterus is detached by cutting through the posterior insertion of the vagina. This usually causes considerable hæmorrhage, which the author completely stops by pressure forceps introduced *per vaginam*. As regards dressing he introduces plugs of iodoform gauze through a speculum, which accurately fill out the vaginal wound. The abdominal wound is then sutured, and the operation is finished, the result being exactly the same as in a vaginal hysterectomy. The small openings made in the broad ligaments and the method of placing the forceps on the broad ligaments distinguish this operation from all others.—*Brit. Med. Jour.*

THE TREATMENT OF GONORRHŒAL DISEASE OF THE UTERINE APPENDAGES AND THE PELVIC PERITONEUM.—Lebedeff treated five cases of gonorrheal pelvic aud tubal disease by intrauterine injections of an alcoholic solution of alumnol mixed with a solution of iodine and alcohol (alumnol 2.5 grammes, solution of iodine and alcohol 25 grammes each). The injections were made with Braun's syringe. His conclusions were that (1) the treatment decidedly shortened the acute inflammatory stage of the disease, lowered the temperature, and lessened the pain; (2) it accelerated the absorption of inflammatory equdations; (3) the symptoms of endometritis became markedly less; purulent discharge changed to a mucous one; gonococci disappeared; hæmorrhages ceased.

MYOMA OF THE UTERUS, WITH PREGNANCY ADVANCED FIVE MONTHS; SUCCESSFUL REMOVAL OE TUMORS AND UTERUS.—Murdoch Cameron, in the *British Medical Journal*, 1895, No. 1823, describes a successful case of total extirpation of the uterus, pregnant five months, for myomatous tumors, which rendered labor impossible. Upon opening the abdomen a large, irregular tumor was seen, consisting of the uterus and a large fibroid of the interstitial variety. An elastic ligature was first applied, and the uterus and tumors amputated. The uterine and ovarian arteries were then tied, the tubes and ovaries removed, and a myomatous tumor blocking the pelvis was loosened from its adhesions and drawn up. The cervix was also separated from its connections, and the peritoneal flaps were stitched to the mucous membrane of the vagina. These ligatures were left long, and were drawn down into the vagina. The parts removed weighed twenty-seven pounds. The patient made a good recovery.

SYMPHYSEOTOMY was performed by Kenneth Cameron in a case with a conjugate of three and one-fourth inches and a living child of eleven and a half pounds delivered by forceps. There were lacerations of both anterior and posterior walls of vagina, which were sutured with silkworm gut. The pubic wound was brought together by six silkworm-gut sutures and covered with iodoform gauze dressing, and straps of adhesive plaster were applied tightly around the pelvis; these were augmented two days later by a broad belt of webbing tightly strapped. The patient made an uneventful recovery. The sutures were removed on the tenth day and all the wounds were found to have healed by primary union. She was allowed to get out of bed on the twenty-first day and to walk at the end of the fourth week. The symphysis seems now to be completely united, as no movements whatever can be felt. She walks well and is able to perform her household duties as well as ever.

NERVOUS DISEASES AND ELECTRO-THERAPEUTICS

IN CHARGE OF

CAMPBELL MEYERS, M.D., C.M., M.R.C.S. Eng., L.R.C.P. Lond.

Neurologist to St. Michael's Hospital. 192 Simcoe Street.

MULTIPLE NEURITIS FOLLOWING PREGNANCY AND CONFINEMENT: PARALYSIS OF THE FOUR EXTREMITIES: CURE.

BY DR. CHARLES VINAY.

The puerperal multiple neuritis arise generally after confinements; they are only rarely observed during pregnancy, and in this case they are accompanied by incoercible vomiting and assume a grave form sometimes fatal (by paralysis of the phrenic nerve). The case related by the author presents this particular and interesting condition that it relates to an intermediate variety, both in the time of its appearance and the gravity of the multiple neuritis, which exists between the two classical forms of this affection.

The patient was a women thirty-eight years of age, pregnant for the eighth time, who during the first three or four months of this pregnancy had frequent hæmorrhages; in the course of the last two months she had suffered much from vomiting. Finally several weeks before her delivery she presented the first symptoms of multiple neuritis in the form of pains, burning sensations and a feeling of formication in the limbs, both upper and lower. The delivery was followed by some general trouble such as malaise, headache, fever for 48 hours, indications of a slight degree of infection, and on the fourth day all the symptoms pathognomonic of multiple neuritis appeared: pains, disturbance of sensibility, weakness and muscular atrophy of the four extremities, without implication of the bladder or rectum, diminution of electrical contractility and abolition of the reflexes.

However as the disturbance of sensibility and the wasting of the muscles was moderate and moreover as their was no distinct reaction of degeneration, the author concluded that he might give a favorable prognosis from the first, and in fact under the influence of a treatment, which consisted in administering every second day a hypodermic of fifteen grains of ergotine, and in giving an electric bath for half an hour on the intermediate days to the legs only, the condition of the patient rapidly improved; at the end of two months she was considered cured. At this time the pains had disappeared and the upper extremities had recovered their normal action: there remained only a little weakness and some slowness in the movements of the legs.—Translated from the *Lyon Med.* by CAMPBELL MEYERS, M.D.

USES OF ELECTRICITY IN THE TREATMENT OF INSANITY.

Electricity in the treatment of insanity has not received the attention that it deserves. Any measure, whether it be palliative or curative, should have an important place in the therapeutic measures of a hospital for the insane. During the time electricity was being advanced as a therapeutical agent it was thought that insanity offered a rich field to demonstrate the efficiency of the electric current. It was accordingly used, found wanting, and discarded. Doubtless the disappointment in its effects was due to the ignorance of its properties and also of the methods of application. Since those days it has often been used sporadically in various ways with varying results.

Electricity, as we know, is not an empirical remedy. This is conceded by authorities. It is recognized, however, and has been repeatedly demonstrated, that the two forms of current have certain well-defined laws.

Arndt states as follows: "Every electric current, however excited, of whatever quality, is calculated to remove mental disorders, but not every current is capable of removing every mental derangement. On the contrary it may aggravate some forms and make them incurable."

Erb, in his statements, may appear too sanguine, but although his suggestions have been adversely

criticized, his directions for treatment are based on scientific studies.

Electricity is a valuable agent for suggestive therapeutics, and doubtless some of its benefits are dependent on this property, but that it has an effect of its own can not be doubted.

In the psychoses, electricity, as an agent for therapeutics, may be used with suggestion in connection with the treatment and without the use of such an agency.

Various modifications of the current are in use, but for all practical purposes the interrupted and continuous forms are alone essential. The determination for their individual use is founded on the usual indications in general disease, remembering that as yet we have no certain rules for their selection. Central galvanization, galvanization of the head, general faradization, alone or with peripheral faradization, are the most important methods. These combined with the so-called electrical massage will be found to meet the usual demands.

In reference to the forms of insanity benefited and the contra-indications I will say only a few words.

It is of course, in the primary insanities we expect it to act as a curative agent. Its remedial effect, however, may be obtained in many psychical disorders. My experience verifies the result of other investigators in this line, and I have, as far as possible, followed the methods suggested by them. As illustrating the benefit which may be obtained by appropriate treatment, I will give a few illustrations: Many of the vesanias, and especially those having a neurasthenic or hysterical basis, are accompanied by what are termed "cephalic sensations." In these cases galvanization of the head often produces speedy relief, and in many cases has a pronounced curative effect. Various muscular and visceral pains, also paresthesia, are, at times, benefited by some form of faradization, or, perhaps, central galvanization. Many female patients have definite points of spinal tenderness. An appropriate course of electricity is sometimes followed by a marked improvement. I mention these few symptoms merely to illustrate what a useful agent we have in the electrical current. I can not refrain, however, from mentioning one more property which is at times beneficial, viz., its tendency to promote sleep. It has been my custom for some time to have patients, after their treatment, resume a recumbent posture. It is surprising to find that some patients, who are habitually wakeful during the day or night, will secure a refreshing sleep. I might mention that this occurs without verbal suggestion. Whether it is due to natural exhaustion, or whether it is a quality of the current, I will not decide. Suffice to say that it is the opinion of all electro-therapeutists that electrical applications, and especially galvanization of the head, may induce sleep. You will find in all your cases that it will be an advantage to secure for your patients rest and quiet for a specified time after all your treatments.

Certain forms of insanity, especially those dependent on toxic agents or organic changes in the nervous system, are accompanied by a change in the electric excitability of nerve or muscle. In these cases electricity may be of considerable benefit in diagnosis.

Electricity as a suggestive agent may also prove a valuable method of treatment. I have in mind not a few cases where verbal suggestion has been employed with the application with a marked improvement in the mental condition of the patient, the improvement not being obtainable by ordinary suggestive measures.

The efficacy of any method of treatment is based on the systematic use of the medicant and a recognized method of procedure. A collection of the results will then enable us to make appropriate deductions. The use of electricity is governed by the same principles, viz, a systematic use of the agent and a recognized method of treatment. In all the recent works on psychiatry, you will find reference to electricity and measures recommended for its employment. I therefore think it useless for me to detail the various methods in use.

Every suitable case should be individually considered, the treatment carefully selected, and the method conscientiously pursued.

For the convenience of the physician and also as a means of reference and compilation, I should suggest a method of recording such as I now show you:

CHART FOR RECORDING ELECTRICAL TREATMENT.

Name.	J. B.
Form of insanity.	Acute melancholia.
Method of treatment.	Galvanization of head, 2-5 milliam.
Interval between treatments. . . .	Every second day.
Number of treatments.	Twenty.
Result and remarks. . . .	Recovery in three months.

Remembering that electricity is a powerful stimulating and sedative tonic, according to the form of current used and the manner of application, we can make the following statements:

1. Electricity is of benefit in many forms of insanity, and in the primary insanities may promote recovery.

2. Systematic use is demanded, and, dependent on the effect desired, a varying length of time should elapse between applications.

3. The choice of the current is governed by the ordinary rules for selection in electro-therapeutical work.

4. Electricity is valuable as a diagnostic agent in insanity, as indicating an intercurrent or complicating disease.—Irwin H. Neff, M. D., in *Am. Jour. of Insanity.*

TRAUMATIC NEURASTHENIA.

Dr. C. E. Nammack presented a policeman who, on October 12, 1892, had attempted to stop three runaway horses attached to a steam fire engine in the Centennial parade. He was successful in this, but although not physically injured, he received a profound psychical shock. One week later it became necessary for him to seek medical advice for the relief of pains in his chest. On the advice of Dr. C. L. Dana he went abroad, and remained there from June, 1894, to October, 1895. He had been perfectly well up to the time of this accident, and his family and personal history were excellent. He remained on police duty for some time, but found himself unable to attend to his work, even though his promotion to the rank of roundsman had rendered this less monotonous than formerly. The first symptoms noticed were diminished power of persistent application, and nervous irritability. Mental exaltation then became marked, and insomnia became most distressing. Hyperesthesia and paresthesia were not noticed. The principal subjective symptoms were pain over the heart and dyspnœa on exertion, profuse sweating and insomnia. Examination recently showed the pain and temperature senses normal, tactile sensibility impaired and hyperæsthesia wanting. Both visual fields showed the shifting type of contraction. Color perception was fairly good. There was no motor weakness of the eyes and no abnormal pupillary reaction. Smell and taste were not affected; station and gait were good; there was some tremor of the hands. The knee-jerks were slightly exaggerated. The heart action was weak and greatly accelerated by walking; there was no enlargement of the heart or valvular disease. Slight irritation of the skin led to persistent redness. His weight had fallen from 220 to 175 pounds. Micturition was not vigorously performed. The urine was normal. The sexual desire was weak, although the power was good. The diagnosis in this case, the speaker said, lay between traumatic neurasthenia, traumatic tysteria and simulation. The last was excluded by the absence of motive, of striking symptoms and of efforts to exaggerate slight symptoms. Hysteria was excluded by the absence of anæsthesia, contractures, spasms, etc., and of paroxysmal phenomena. The patient had had the benefit of skilful treatment and improvement had been slow but steady. Apparently hydrotherapy had benefited the patient the most. The case was interesting as being free from the usual complications arising from prospective lawsuits.

Dr. C. L. Dana said that when he saw this case he made the diagnosis of traumatic neurasthenia. The case was an interesting and typical one, and was chiefly of importance on account of the absence of the complications referred to.

Dr. Nammack, in closing, said that formerly considerable stress had been laid upon the condition of the visual fields as a differential point between traumatic neurasthenia and hysteria, but that now this had been pretty much abandoned.

IMPERATIVE CONCEPTIONS AS A SYMPTOM OF NEURASTHENIA.—(*Med. News*, January 11, 1896.) In the first of two cases reported by Dr. Diller, of Pittsburg, the onset was sudden, occurring in a business man who had been overworking for a long period. The attack took place during a theatrical performance while the patient was seated in the front row of the balcony. He was barely prevented from hurling himself over the railing. The second case was that of an engineer on a railroad. The man had complained for some time of the usual symptoms incident to nerve-tire, viz.: headache, vertigo, loss of endurance, irritability, insomnia, and general muscular weakness with twitchings. Finally so great became his fear of wrecking the train in his charge that he voluntarily resigned his position. Both of these cases recovered in about six months under a judicious combination of mental and physical rest.

INTERCOSTAL NEURALGIA.—A local application much used in the clinic of Dr. S. Solis Cohen for the relief of vague pains localized at different points upon the surface of the body, as well as in the treatment of *intercostal neuralgia* and the pleuritic stitches of chronic pulmonary tuberculosis, is the following:

Menthol,
Chloral hydrate,
Camphor,
Equal parts . . . . . M.

Label—Apply to painful part with camels'-hair brush once daily, or as symptoms may indicate.

In this prescription liquefaction of the solid ingredients takes place when they are brought in contact. The resulting fluid is slightly stimulating, slightly irritant and decidedly analgetic. Should its too frequent application result in vesication its use is intermitted until the parts heal.

CHRONIC DRY NASAL CATARRH.—The following prescription is recommended by one who has successfully tried it for chronic dry nasal catarrh:

Liquid vaseline, ...	1 oz.
Sanmetto, ...	¾ oz.
Glycerine, ...	¼ oz.

To be used as a spray three times daily through an atomizer, and to take internally Sanmetto in teaspoonful doses four times a day.

PATHOLOGY AND BACTERIOLOGY

IN CHARGE OF

H. B. ANDERSON, M. D., C. M.,

Pathologist to Toronto General Hospital; Professor of Pathology Trinity Medical College, and in charge of the Trinity Microscopic Pathological Laboratory, Toronto General Hospital.
233 Wellesley Street.

PREFERENCE OF THE DIPHTHERIA-BACILLUS FOR THE TONSIL.

Evidently the bacillus flourishes best not only in the presence of oxygen, but in a current of air. And where in the entire alimentary canal can this requisite be met except upon the back part of the inner surface of the tonsil? Which is precisely the point of attack in 80 per cent. of our cases. It seems to be pretty clearly established that diphtheria almost invariably enters the system through the alimentary canal, either in the food or drink, or by labial contact, and the comparative immunity of the mucosa, of both mouth and stomach from attack has been a matter of surprise, for which, however, the absence of an air-current in these situations gives, at least, a plausible explanation. The mouth is, of course, frequently attacked, and the stomach in rare instances, but both almost always secondarily, after the germ has gained a vigorous foothold upon the ventilated surface of the tonsil. This demand of the germ also helps to explain its marked tendency to extend along the air-passages rather than the alimentary tube, and also the fact that its most vigorous and virulent growth occurs at the point where the air-current is most rapid, the interior of the larynx, the trachea, and especially upon the vocal cords. The extreme virulence and high death-rate from systemic poisoning and heart-failure of diphtheria of the nasal passages are also more easily understood. May not the special liability of the nerves of the palate-muscles in general, and azygos uvulæ in particular, to peripheral neuritis and paralysis after diphtheria, be partially due to their nearness on both aspects to surfaces swept by a current of air and hence peculiarly suited to the development of a virulent form of the toxins?

Fortunately, however, the tonsil is, to use a Hibernicism, not only the most vulnerable, but one of the best protected places in the body. For every dart nature seems to have a shield. And in this case the shield consists of the swarms of leucocytes poured forth by the gland. They cannot defeat the enemy in a fair fight upon a field of his own choosing, for they are sappers and miners rather than riflemen, but they bravely bar his way into the heart of the country by a solid rampart of rank upon rank of their dead bodies. This is the famous and much-maligned "membrane," which happily in a large majority of cases is successful in mechanically cutting off the Klebs-Lœffler pirate from the base of supplies which he hoped to establish in the rich inland districts. When his forces have become enfeebled by starvation, the membrane craftily detaches itself and sweeps the invading army down with it into the war-like gastric districts, where the leucocytes have all the advantages of the situation; can massacre the bacilli at their leisure and eat them afterward.

This again coincides with the clinical observation—that so long as the membranes are well developed and *confined to the tonsils*, constitutional symptoms are usually few and mild, and reinforces the *old* teachings as to the danger of forcibly detaching the membranes, and the *modern* ones as to the harmfulness of too frequent swabbings. It also fits in with the fact that many of the most rapidly-fatal cases are attended by the formation of very little membrane, or of only a thin pellicle, as is usually the case in nasal diphtheria, where both the fixed cells and leucocytes seem simply overwhelmed by the virulence and rapid production of the toxins before they have time to form a membrane.—*Echoes and News.*

IMMUNITY FROM ANTITOXINE.

That the immunity conferred by the antitoxine (passive immunity) does not protect over as long a period as natural immunity (active immunity) has long been known as far as animals are concerned. Cases showing the duration of this artificial immunity in man, are not, however, common. Henach has reported a case in which a recurrence of the disease occurred from 25 to 30 days after the use of the antitoxine, and Wolff-Lewin reports a case where a child who had apparently recovered perfectly after the use of antitoxine, developed symptoms of a fresh attack ten days from the beginning of the first one. In our case the patient was immunized on January 7th and contracted a

second attack of what was presumably diphtheria about three weeks later; it is true that the patient was not under observation during this second attack, but cultures made only a week later showed the diphtheria bacillus to be present in the throat. During this second attack no antitoxine was used, and yet a third attack occurred thirty-seven days after the beginning of the second. In this case, then, the period over which active immunity lasted would seem to be about thirty-seven days, whilst that over which passive (antitoxine) immunity lasted was only twenty-one days.

It seems highly probable that auto-infection occurs in most cases of croupous pneumonia and in many of streptococcus throat; it is also known that virulent diphtheria bacilli are occasionally found in the throats of healthy people. This case would seem to prove definitely that auto-infection does occur in diphtheria, as it was shown that the diphtheria bacilli were constantly present in the throat between the second and third attacks, the throat all this time presenting a perfectly normal appearance. It is only fair to conclude that when the immunity was worn out the individual became affected by the bacilli then present.

Although the patient was not under constant observation from January 7th, when the first attack began, until April 10th, when the diphtheria bacilli finally disappeared from the throat, yet cultures were made frequently enough to warrant the assumption that the bacilli were continuously present over the period between the dates specified. In an observation recorded in the *British Medical Journal* of which Sevestre speaks, the bacilli were obtained from the throat seven months after the disappearance of the membrane; but in this case the cultures were few and far between. The question of the survival of the diphtheria bacilli after the disappearance of the membrane is an important one from a prophylactic point of view, for we must admit the possibility if not the probability of individuals such as our patient transmitting the disease to others. Such a possibility once being established, the isolation of diphtheria cases would not be subject to any fixed law, but would depend on the demonstration of the presence or absence of the bacillus in the throat.—*Johns Hopkins Hosp. Bulletin.*

ETHMOID DISEASE.—Dr. Thrusher, of Cincinnati, considers that the middle turbinate bone is more frequently the seat of disease in so-called catarrhal cases than any other part of the nose and from its anatomical situation in the upper part of the nasal fossa, from pressure when in a swollen condition may cause all sorts of reflex phenomena. He advocates removal of the enlarged tissue with the cold snare, warning against the use of the cautery in this situation (with which the editor agrees). He describes the principal symptoms as follows:

"1. Pain, generally referred to the infra or supra-orbital nerve, sometimes to the eye or orbit (more especially when fhe ethmoid cells are also involved), and occasionally to the ear. I have no doubt but some of the severe facial neuralgias for which exsection of the nerve has been performed would have been better relieved by exsection of a diseased middle turbinate.

"2. Nasal discharge, sometimes of exceedingly unpleasant character. Ehe discharge from the cells themselves often irritates the membrane in front, giving rise to a sore and red nasal extremity.

"3. Obstruction to breathing and anosmia; but frequently the breathing channel is not impeded even in severe inflammation of the middle turbinate.

"4. Obstruction of the natural openings of the accessory cavities, notably the antral, frontal, and anterior ethmoid, occasioning in each case its own train of symptoms.

"5. External deformity of the nose only, and when the ethmoid cells are involved the eye is often misplaced by orbital swellings.

"6. Various reflex nervous phenomena."

GONORRHŒAL PLEURISY.—In a recent article Faitout reviews all the reported cases of this nature. As a result of this review he finds that, though a good many cases are reported, very few present sufficient evidence to be classed as gonorrhœal pleurisy. One case, however, reported by Bordoni-Uffreduzi, seems to definitely prove that gonorrhœal pleurisy can occur. The case was one of a young girl, aged eleven years, who was assaulted by an individual with gonorrhœa. Some days afterward she was attacked with severe polyarthritis and later a double pleurisy developed. Shealso showed symptoms of endo- and pericarditis. Dr. Mazza, on examination of cover-slips from the pleural exudate, found numerous organisms morphologically resembling gonococci within the leucocytes. Furthermore, he was able by Wertheim's method to cultivate the organism and show that he was dealing with a pure culture of Neisser's coccus. The author comments on the need of further bacteriological investigation on this subject.—*Gazette Médicale de Paris*, October 5, 1895.

DR. STEELE, of Plaistow, reporting a case of erysipelas neonatorum successfully treated by anti-streptococcic serum remarks:—In the practice of the Plaistow Maternity Charity I have seen a fair number of cases of erysipelas neonatorum, but I have never seen one recover when the disease was so far advanced as in this case. I am convinced that the child's recovery is due to the anti-streptococcic serum. No other treatment of any kind was adopted.—*Brit. Med. Jour.*

THE CANADA LANCET

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address*, DR. J. L. DAVISON, 12 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P. O. Orders to be made payable to* DR. G. P. SYLVESTER, Business Manager, 585 Church St., Toronto.

AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John N.B.; Canadian Advertising Agency, 60 Watling St London. 5 Rue de la Bourse, Paris.

Editorial.

IN RE ROËNTGEN'S X RAYS.

It is the glory of medicine that it owns no patents and conceals no discoveries! In a less degree this is true also of general science. Had any man, other than a scientist, found out that radiant energy of a kind previously unknown could be put to practical use, his first proceeding would have been to file application for patents in all civilized countries. These obtained he would, through their aid and that of the capitalist, have started to join the ranks of the multi-millionaires.

Through the communism of our profession, in less than two months from the first announcement of what is incorrectly called "The new photography," physical scientists, physicians and amateur photographers everywhere are prosecuting the study of these new properties of light, along lines laid down by the Würzburg professor. Already signal advances have been made upon the original proposition and in the importance as well as in the priority of these advances, Toronto and Montreal take no inferior positions.

It is the purpose of the CANADA LANCET to present from time to time reports upon the methods which may prove most satisfactory in the application of this new departure to the purposes of medicine. At present we shall consider but a few points regarding the production of shadow pictures through opaque substances.

The algebraic symbol for an unknown quantity was selected by Prof. Roëntgen to indicate the radiant energies by which the taking of such silhouettes has become possible. Their discovery and the beginning of their utilization has created more interest than any one innovation since Koch's lymph was boomed. The daily press has their means, and the public is being educated up gone daft over the possibilities opened up by to certain disappointment. It is the part of a wise conservatism to prove all things, and until this new energy has been harnessed and put more fully to practical uses a measure of reserve regarding its importance to medicine is commendable. Stripped of all sensationalism the facts so far established seem to justify this summary :—

If a current from an induction coil similar to the coils on Faradic batteries, but very much larger, be passed into a glass globe or tube by means of metal connections and if then the air be exhausted from the globe the electrical current produces in the evacuated tube the so-called "Geisler" light, which is visible to the human eye. As the exhaustion proceeds the light diminishes and at a certain point totally disappears. In its place the glass of the globe or tube becomes phosphorescent from the action of invisible rays from the cathode or negative pole. These phenomena have been known and studied since 1879.

The so-called cathode rays do not pass through the glass of the globe, and they are turned from their course by an electro-magnet, thus proving that they are not of the same nature as the luminous rays.

If the vacuum be produced in the highest degree, rays are produced which differ from cathode rays in that they do pass through the glass, that they are not deflected by a magnetic fluid, and that they pass in straight lines through material opaque to ordinary luminous rays Covering the globe with black cloth in a dark room and placing within six feet of it a card coated with luminous paint, the card will glow with phosphorescent light, showing that the coating has been impressed in some way by energy penetrating the opaque covering. By chance, Roëntgen observed that this energy was capable of making an impression on an ordinary photographic plate in its holder, and with its covering slide of black card board not drawn. He also observed that opaque materials were penetrated in varying degrees by these rays. Wood, for example, offered less resistance to the rays than clear glass to the rays of ordinary light. Metal even in thin sheets,

afforded marked resistance. Flesh in masses not too thick, was easily penetrated, but bone not at all so. Substances placed between the globe so evacuated and electrically—energized, and a photographic plate in its holder, cast shadows, which, after the development of the negative, could be reproduced as ordinary prints. This is the sum and substance of the discovery, and the now familiar pictures of the human hand, showing the bones as deeply shaded, and the flesh covering them in half tone, can be easily understood.

In a similar way a ball lodged in flesh can be located by the simple process of placing the limb on, or in front of, the photographic plate-holder and sending the X rays from the glass globe through the limb. The bone and the ball will appear as silhouettes on the plate, after it has been developed.

With improved apparatus giving more powerful radiations, the method may aid in the diagnosis of gall or kidney stones, but beyond the help it can give in locating foreign bodies, its advantages to surgery are as yet problematical.

The terms shadowgraph, skotograph, xograph and radiograph, have been proposed for the prints from negatives taken by this method. The first of these conveys a different meaning in a simple form, the second and third are in language not "understanded of the people," while the fourth is a hybrid word, radius being Latin and graphic Greek.

At present the cost of an apparatus of the kind above referred to, suitable for use in hospitals, would approximate $50.

ACUTE ARTICULAR RHEUMATISM.

From the days of Hippocrates, when the "humor" idea was prevalent, to the present time, the cause of the disease now known as acute articular rheumatism has frequently excited much discussion, but has so far eluded discovery.

Under the *humorists*, the idea, we can scarcely call it a belief, was that "an acrid humor was generated in the brain and distributed over the body." That was sufficiently hazy for even the most transcendental minds of the present day.

Our terminology has been, and is still extremely vague, and unsatisfactory as regards many ailments coming under the general term rheumatics. All sorts of troubles take the name, either because they are painful, or are supposed to be produced by the action of cold. Thus muscular rheumatism, rheumatic gout, rheumatoid arthritis, are all misomers, inasmuch as they have no relationship to true rheumatism, however convenient it may be to dub them rheumatic, on account of their painful nature.

But what is the essential nature of acute articular rheumatism? Fagge, writing a good many years ago, said that it presented the characteristics of an epidemic disease, though he still believed it was not due to an infective agency; but rather "to the greater or less incidence of cold upon the population in such a form as to be effective in producing chills." Which explanation is unworthy of the great Fagge, who, had he lived to the ordinary span of life, would no doubt have been in the first ranks of modern thinkers. Strümpell, as long as four years ago stated distinctly that it "is an infectious disease." Other observers in the past five years have adopted the same views, which, by the way, were first advanced by Hüber. The specific pathogenic organism or organisms which cause the disease have not yet been demonstrated, but all the clinical and anatomical peculiarities of the disease point to its being dependent upon an infective agent, though the disease is non-contagious.

From Norway and Denmark, where the disease is very common, important information has been received. In these countries notification of the authorities, of all cases treated has been carried on for some time past. The disease has certain well recognized congeners in the form of minor ailments, notably inflammatory affections of the throat, such as pharyngitis and tonsillitis; and certain cutaneous phenomena, among which the most common are, profuse perspirations, sudamina, erythema nodosum, and other forms of erythema, and urticaria.

Buss, of Bremen, showed in an elaborate paper the relationship of tonsillitis to acute rheumatism. He concludes that it is in the highest degree probable that it is in many, if not in the majority of cases due to pyogenic organisms which have lost some of their virulence, although there is evidence that the bacillus of pneumonia and the diplococcus of Frænkel have also the power of producing the disease. In his paper he has compared

acute rheumatism to ulcerative endocarditis and pneumonia, which were formerly believed to be due to a specific micro-organism, but in which it has been shown that various different micro-organisms are capable of producing the same group of symptoms.

CRIMINAL ABORTION.

Few medical men, especially in the early years of their practice, escape the temptation to earn large fees by inducing criminal abortion. Some friend has got a young woman of good and large family connections "into trouble." He applies to the doctor for help, urging the impossibility of marriage, and the certain disgrace and ruin of both himself and the "lady" if the matter is not attended to. Only one period has been missed, it would be so easy to do; so little risk of discovery would be run, and the eternal gratitude of the friend and his partner in crime would be certain. The doctor knows also, that if he does not assist, some one else, less conscientious, or at least less cautious, will do so, and earn the fat fee, etc. The tears and supplications of the fair sinner are sometimes added to other modes of entreaty, and occasionally the doctor yields.

In the great majority of cases the culprits escape with a few days or weeks of anxiety. But now and then, even with all the care and skill used, death comes to the unhappy young woman, and exposure and ruin to the doctor and his accomplice.

We believe that if all the cases of abortion brought on by doctors and others were known, the list would be appalling. Married women, with large or small families, often seek the aid of professional abortionists when their own physician refuses to aid them in avoiding an increase of maternal cares. The history of nearly every city and large town shows that, persons pursuing the nefarious calling of abortionists live and thrive by it.

Not one case in a thousand perhaps, comes to the courts. Many a woman is done to death, and the public is never the wiser, the family preferring to suffer her loss, rather than bring disgrace upon themselves.

Young women, and indeed married women, have as a rule very lax ideas as to the *sin* of doing away with an unborn child, especially when *they* are personally concerned. If it is someone else's ox that is gored, that changes at once and completely, the complexion of the case.

Quite recently, at Warwick, in England, a midwife was sentenced to death for having brought about a miscarriage. The defunct woman had attempted in vain to induce a medical man to aid her, the midwife had done so, with the result of septicæmia and death in a few days.

It could not be shown that the midwife had used any "instrument," and she denied having used any. By "instrument" we suppose was meant one of metal or rubber, such as a sound or catheter, though why ergot or rue should not in law be considered an instrument, we are not able to discover.

The learned judge in summing up, held that if the intention was to commit a felony, and in carrying out that felony, death ensued, that was murder. The jury accordingly brought in a verdict of guilty of murder, and the judge passed the death sentence.

It should be the duty of the police in this and in all other countries to discover, and prosecute those abortionists, who, by their criminal practices, cause the death of many women.

TRINITY MEDICAL SOCIETY.

The final meeting of the above society for the session of 1895-96 was held in the College building, Spruce street, on the evening of the 18th Feb. The President, M. J. H. Allin, occupied the chair. Dr. J. T. Fotheringham opened the meeting with a paper on medical ethics. Dr. Shuttleworth followed with a paper on "Serum Therapy," which will be published by the society. Dr. Lamont then presented a case of stricture of the œsophagus for diagnosis and also the clinical history, P. M. report and specimens of a case of heart disease. Mr. Eagleson presented a case of congenital abnormality of the kidney, found in the dissecting room. Mr. Brereton closed the papers by relating the history and treatment of a case of leucæmia. These papers proved of such interest and instruction to the large assemblage of members present

that a vote of thanks was passed unanimously by the members to the above gentlemen. The papers being opened for discussion, the following gentlemen took part: Drs. Pepler, Anderson, Shuttleworth and Roberts; Messrs. Allin, McRae, Nyblett, McIntosh, Lapp and Clare. A vote of thanks was unanimously passed by the members to the officers of the society for the closing session. Mr. Allin and Dr. Roberts replied briefly on behalf of the officers. This brought to a close one of the most enjoyable and successful meetings of the society, which we trust may long continue its good work as prosperously as it has been done during the past year.

LONDON MEDICAL ASSOCIATION.—The following copy of a resolution passed at a regular meeting of the London Medical Association, held February 10th, 1896:

Moved by Dr. Ferguson, seconded by Dr. Arnott, and *resolved*, That the London Medical Association recognizes the services rendered to the medical profession by the Council of the College of Physicians and Surgeons of Ontario, in maintaining an efficient standard of medical education for students, providing for the registration of licentiates, guarding the rights of registered practitioners, prosecuting unlicensed practitioners, and erasing the names of practitioners guilty of infamous or disgraceful conduct in a professional respect.

This Association accordingly holds it to be the duty of every member of the College of Physicians and Surgeons of Ontario, promptly and loyally to pay the annual assessment fee, levied, in accordance with the provisions of the Ontario Medical Act, for the maintenance of the general expenses of the College; and it is further claimed that members of the College taking exception to any of the administrative acts of the Council should seek reforms by way of the medical electorate, rather than by attempting to withhold the payment of assessments authorized by the statute, and indispensable to the very existence of a Council.

Yet this Association begs to protest against By-law No. 69, passed by the Council on the 28th June, 1895, which suspends the penal clause of section 41 of the Amended Medical Act for Ontario until June 1st, 1896, then to come into force only "in case a sufficient amount of dues is not paid in to cover the bank liability." This Association submits the said qualification is grossly unjust to members of the profession who have paid, or may pay, their assessment prior to June 1st, 1896, and affords a loophole to delinquents who are disposed to shirk payment of their fees. The Association recommends the Ontario Medical Council either to rescind said clause of the by-law, or, otherwise, to furnish every member on payment of his fee, a guarantee that no other member shall be permitted to escape payment of his legal indebtedness to the Council.

And *resolved* further, That a copy of these resolutions be forwarded to the Registrar and to the medical journals of the province.

A SPECIFIC FOR SPASMODIC CROUP.—Among the remedies for acute laryngitis suggested in a recent and elaborate contribution to the *Jour. Am. Med. Assoc.*, Dr. Feum says: I am surprised that no mention is made of the oleoresin, improperly called "balsam" copabia. I regard its employment as quite an advance on the antiquated ipecac, turpeth mineral, *et id omne genus* treatment, and for many years I have used it to the exclusion of all such. Preferably, it should be given in a full dose of fifteen or twenty drops to a child two or three years old, at bedtime, or immediately following the first hoarse inspiration or cough. This will generally carry the little patient through the night, or certainly until the early morning hour, when a recurrence of the paroxysm is often expected. *En capsule* is the best method of administration, for the purpose of disguising the unpleasant taste. The syrup of copaiba, prepared by rubbing the oleoresin with calcined magnesia, and adding oil of peppermint and simple syrup, is an eligible formula. Less so, is an emulsion with mucilage, yolk of eggs, or alkalies. The required doses, however, are so few, and time often of such importance, that I commonly extemporize a combination of the remedy with sugar or molasses. The element of fear of suffocation usually renders the little patient quite tractable, so that he gracefully submits to almost any form of medication at such times. I can yet recall, *ad nauseum*, the not infrequent doses of "hive syrup" of my youth.

In the presence of a severe attack, I give the copaiba *imprimis*, and then transfer the child, if

in a cold room, to the nursery or kitchen, where he is subjected to heat and steam. A shawl thrown over the heads of nurse and child, as well as over the tea-kettle, is a ready method. The first whiff of steam relaxes the spasm, if the remedy has not already done so, and the crisis is past. The child should be detained in a warm room for the two succeeding days and nights, taking similar or smaller doses each evening upon retiring, and, if thought best, a few drops at intervals during waking hours.

By this method, the system is not relaxed with a tendency to contract additional cold, and I am sure it will supply a long-felt want to paterfamilias if not to his progeny.

Rest in Cardiac Affections.—Dr. T. Lauder Brunton, *The Practitioner*, believes that as a remedial measure, rest frequently requires to be absolute. As a preventive one it may be relative. The amount enjoined must be carefully proporsioned to each case, as in advanced mitral disease, when the power of the heart is failing, absolute rest gives satisfactory results, in that the circulation recovers its balance, the arteries become filled and the veins emptied, the dropsical effusion and venous engorgement of the organs disappear, and the patient recovers a fair amount of health. In cases of mitral disease incompetence may come about from :

1. Enlargement of the auriculo-ventricular orifice.

2. Thickening of the valves, or

3. Inco-ordinated action of the musculi papillares.

In the first case it may be hard to say if this be the sole cause of the regurgitation, without any obvious disease of the valves, as some disturbance of the relationship between the musculi papillares may tend to aid the regurgitation. In such hearts in growing boys and in chlorotic girls, comparative rest may be useful, and sometimes absolute rest may be almost essential. In some cases the former may be all that is wanted as a prophylactic measure. In chlorotic girls gentle exercise is advisable, but it must be carefully graduated, as exhaustion is likely to do harm. Massage must be useful, as it gives the patient exercise without putting any strain upon the heart. With a fatty heart gentle exercise may be advisable, as it may be more likely to bring about a healthy condition of the heart than absolute rest. When in mitral disease cardiac tonics, even pushed to their utmost limit, fail to give relief, then absolute rest becomes of great importance. Massage is of great usefulness in clearing out the body waste, quickening the flow of blood through the muscles and relieving the œdema, and the patient gets the advantage of the exercise without overdoing the heart. It also allows the treatment to be carried out more easily than it would otherwise be, for it removes the feeling of weariness and irritability, faintness and unrest of the patient.

Diagnosis of Chronic Hydrocephalus in Early Stages, Before Enlargement of the Skull has Occurred. *Boston Med. and Surg. Jour.* The difficulty in the diagnosis of hydrocephalus is naturally much increased when the collection of fluid in the ventricles has not yet led to enlargement of the skull. The diagnosis must then rest wholly on the clinical symptoms. Of these an exceedingly important one is the well-recognized spastic condition of the extremity muscles, which, however, varies within wide limits. This condition occurs not infrequently before the head has begun to enlarge, and especially in those cases in which an external hydrocephalus alone exists, or is accompanied by a collection of fluid in the ventricles. In cases of uncomplicated internal hydrocephalus the enlargement of the head is apt to occur at an early period in the disease, and so lead to an immediate correct diagnosis. Attacks of recurring eclampsia are of less importance than the more permanent spastic conditions. Congenital spastic rigidity of the limbs (Little's disease), is usually due to defective development or to diffuse sclerotic processes in the cortex, and may occur quite independently of hydrocephalus. Especially important in differential diagnosis are the following facts well stated by V. Ranke :

1. In congenital spastic rigidity the lower extremities usually are alone effected, whereas in hydrocephalus the arms are attacked as well, and at times even the muscles of the body.

2. The congenital spastic condition is usually first noticed when the child begins to walk ; the rigidity resulting from hydrocephalus, on the other hand, is for the most part an exceedingly

early symptom. 3. Accompanying eclamptic attacks are an indication in favor of hydrocephalus.

The differentiation of hydrocephalus from tetany is usually not difficult owing to the progressive tendency of the one, and the tendency of the other, after a lapse of two or three weeks, toward recovery. Furthermore, cases of tentany with spontaneous tonic contractures in all extremities are very rare, and when they occur characteristic positions of the hand (obstetric hand) make diagnosis easy.

CHLOROSIS.—The late Sir Andrew Clark recommends the following treatment for chlorosis, *Am. Med. Rec.* With careful attention to the diet and a tepid sponge, followed by brisk towelling both night and morning, he prescribes the following mixture, to be taken twice a day:

℞—Ferri sulphat.	gr. xxiv.
Magnes. sulphat. . . .	℥ vi.
Acid. sulph. aromat. . .	℥ i.
Tinct. zingib.	℥ ii.
Infus. gentian comp. vel quassiæ	℥ viii.—M.

Sig.—One-sixth part twice daily, about eleven and six o'clock.

"Occasionally this acid mixture produces sickness, dries the skin, and is otherwise ill borne." In such cases he prescribes the following alkaline mixture:

℞—Ferri sulphat.	gr. xxiv.
Sodii bicarb.	℥ ii.
Sodii sulphat.	℥ vi.
Tinct. zingib.	℥ vi.
Spt. Chloroformi . . .	℥ i.
Infus. quassiæ	℥ viii.—M.

Sig.—One-sixth part twice daily, at eleven and six.

Sometimes neither mixture agrees, and then he prescribes sulphate of iron in pill with meals and a saline aperient on first waking in the morning. By this plan Clark claims that nine out of ten cases of chlorosis recover in from one to three months, and by careful attention to the bowels, taking twice a week a pill composed of aloes, myrrh, and iron, the recovery will probably be permanent.

SILVER NITRATE.—With regard to the effect of nitrate of silver in minor ailments, there is no more striking illustration of it than in those cases of weak, irritable stomachs which are characterized by intense depression of spirits, apprehensions, and failure of pluck or courage. *N. Y. Med. Jour.* In these cases a remarkable change takes place both in the functions of the stomach and in the tone of the nerve centers of emotion. To get the best results in these stomach cases, the nitrate should be dissolved in distilled water and taken on an empty stomach. Dr. Murray thinks that a distinct local effect on the mucous membrane, as well as the more remote effect on the nerve centers, by giving it in this form is produced.

OTORRHŒA.—A child, suffering with double acute inflammation of the middle ear, with perforation and free muco-purulent discharge from both ears, was brought to Dr. Randall's clinic during the first week in August. *Phila. Polyclinic.* The auricles were entirely covered with the discharge, and they had become macerated and eczematous from neglect. A knowing friend had warned the mother not to interfere with the discharge, "else it might strike in with fatal results." The parts were thoroughly cleansed with hot water and solution of hydrogen dioxide and Politzerization was done; after which boric acid was insufflated into the external canals, and ointment of yellow mercuric oxid applied to the eczematous auricles. This treatment led to speedy recovery.

DR. HENRY O. MARCY, of Boston, at the late meeting of the Mississippi Valley Medical Association, read a paper defending the Whitehead operation for hæmorrhoids. *Tri-State Med. Jour.* It was in the nature of a reply to the strictures cast upon the Whitehead operation by Dr. Edmund Andrews, of Chicago, in a paper read before the last meeting of the Illinois State Medical Society. Dr. Marcy believes that if in the statistics given by Dr. Andrews the names of the operators were mentioned most of the disastrous results will be found to have followed the work of incompetent men. His results had been excellent in those cases in which he had done the Whitehead operation, slightly modified by himself.

NERVOUS SYMPTOMS AFTER CASTRATION.—Faulds reports, *Brit. Med. Jour.*, seven cases in

which this operation was performed. In the first, hemiplegia occurred with death, four weeks after the operation, The second developed acute mania six days after the operation, and died ten days after. The third developed mania, and died on the twelfth day The fourth exhibited the same symptoms, with the same result—death. The fifth had no appreciable mitigation of the urinary trouble thirty days later. The sixth was one of single orchectomy. The patient died in a few days insane. The seventh a single orchectomy, developed distinct mental weakness, and death followed. The previous nervous and mental state is not given. In prostatics, this would be as potent a predisposing cause as it is in operation for cataract in the aged.

Vitapathy.—One "vitapath" has been lately arrested and fined in Cincinnati for practicing without a license. Judge Dustin said in pronouncing sentence: "Men who knowingly go into a sick room and prevent anything being done for a dying man by silly incantation and laying on of hands, *Lancet Clinic; Med. Standard*, are responsible for his death and ought to be on a par with a murderer in the eyes of the law. God help the dying man who relies upon you or any of the so-called graduates of quackery. You speak of vitapathy being of a higher power than medicine and you say you ordain ministers at the same time you matriculate vitapathic physicians. Your methods are an insult to intelligence, their practice is a criminal abuse of ignorance and your college a disgrace to civilization."

The New York School of Clinical Medicine has succeeded in introducing a modified form of the European manner of personal instruction, suited to the needs of busy American practitioners, who need brushing up in the specialties, but who can afford only a few weeks' time for the purpose. The method consists essentially in limiting the class to a very few students and having them act as assistants in attendance on the vast clinical material at the school's disposal. As soon as qualified, the matriculants examine, treat and operate on patients themselves, the teachers acting as assistants. The school itself as well as the hospital and dispensaries at which its teaching is done, are fitted with everything to meet the requirements of most modern science. We most cordially recommend this plan of teaching to physicians going to New York for post-graduate instruction.

Mr. Wm. F. Nickle has been appointed by the Ontario Government governor of the General Hospital, at Kingston, in place of the late Dr. K. N. Fenwick. Mr. Nickle is at present on his wedding tour in Europe, and is expected to return to Kingston within the next few months.

Dr. Jas. Third, who has been appointed superintendent of the Kingston General Hospital, is a Trinity man, and a gold medalist of Trinity Medical College.

Obituary.—As we go to press we received the sad news of the death of Dr. Laughlin McFarlane, of this city. We will refer to him more fully in our next issue.

Books and Pamphlets

A Manual of Syphilis and Venereal Diseases; By James Nevins Hyde, A.M., M.D., Professor of Skin and Venereal Diseases, Rush Medical College; Dermatologist to the Presbyterian, Michael, Ruse and Augustana Hospitals; and Consulting Physician to the Hospital for Women and Children, Chicago; and Frank H. Montgomery, M.D., Lecturer on Dermatology and Genito-Urinary Diseases, and Chief Assistant to the Clinic for Skin and Venereal Diseases, Rush Medical College; Attending Physician for Skin and Venereal Diseases, St. Elizabeth's Hospital, Chicago. With 44 Illustrations in the text and 8 full-page plates in colors and tints. Philadelphia: W. B. Saunders, 925 Walnut Street. 1895.

This Manual has been prepared with the intent of meeting the special needs of the student and of the practitioner rather than of the expert. The aim has been to supply, in a compendious form, and with detail, all practical facts connected with the study and the treatment of Syphilis and Venereal diseases

The book contains over six hundred pages, one half of which are devoted to the study of syphilis; the other dealing with venereal diseases other

than syphilis. Treatment is discussed very much more fully than is customary in medical works in general, the various methods being described in detail, and from a practical and yet scientific standpoint.

HISTORY OF ANÆSTHESIA OR PAINLESS SURGERY; By Wm. R. Hayden, M.D. New York: International Journal of Surgery Co. 25 cents.

The author has collected a good deal of evidence going to show that to Dr. Morton belongs the honor of having introduced anæthestics. To those who are interested the brochure will supply much matter for thought or argument on the old-new question of who discovered the surgical possibilities of ether. Massachusetts has placed Dr. Morton's name, second among those of fifty-three immortals (a goodly number by the way, for one state) that now adorn the dome of the State House. So that so far as Massachusetts is concerned the question is forever settled.

MATERIA MEDICA AND THERAPEUTICS; A Practicrl Treatise with Especial Reference to the Clinical Application of Drugs. By John V. Shoemaker, A.M., M.D., LL.D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital, Philadelphia, etc., etc. Third edition, Thoroughly Revised, Reset with New Type and Printed from New Electrotype Plates. Royal Octavo, Pages ix. 1108. Extra cloth, $5.00 net; Sheep, $5.75 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

In this the third edition the author has combined the two volumes into one, which no doubt makes it more convenient for the reader. All the latest remedies are fully described, and new applications of old remedies. The subject of treatment by animal extracts, antitoxines, etc., has been fully and well written.

THE ART OF COMPOUNDING; A Text Book for Students and a Reference Book for Pharmacists at the Prescription Counter. By Wilbur L. Scoville, Ph.G., Professor of Applied Pharmacy in the Massachusetts College of Pharmacy. Philadelphia: P. Blackiston, Son & Co. 1895.

Every one knows that a thorough knowledge of details makes all the difference between a dispenser of elegant mixtures or those of an opposite character. Very slight differences in operations upon the same prescription make all the difference. The object of Professor Scoville's work is to supply such notes as would enable students to properly classify various prescriptions and to attach proper importance to details of manipulation. The work should be invaluable to students of pharmacy and to all dispensers.

THE YEAR-BOOK OF TREATMENT FOR 1896; A Critical Review for Practitioners of Medicine and Surgery. 12mo., 484 pages. Cloth $1.50. Philadelphia: Lea Brothers & Co., publishers. 1896.

This old favorite is again with us. As heretofore it is a summary of the year's advances in all departments of medicine and surgery, presented in a classified form for ready assimilation and quick reference. In this the twelfth issue a lecture on tropical diseases has been added. The names of the contributors are a sufficient guarantee for the quality of matter found on its pages. It closes with a classified list of the best new books, a section on Medical Instruments and Surgical Appliances; Pharmaceutical and Dietetic novelties, and an index of subjects placing anything in the volume instantly at command.

Births, Marriages, Deaths.

The charge for inserting notice of births, marriages and deaths is fifty cents each insertion.

ORTON—At Guelph, on Sunday, February 2nd, the wife of Dr. Thomas H. Orton of a daughter.

BRYCE—At Homewood, Bracondale, on 21st February, the wife of Dr. P. H. Bryce of a daughter.

LOW—On Saturday, Feb. 8th, the wife of Dr. Low, Regina, N.W.T, of a daughter.

BEATTY—TRULL—At Brampton on Wednesday, Feb. 5th, 1896, A. C. Beatty, M.D., of Garden Hill, to Miss Sophia Trull, of Leskard.

ELLIS—At Portland, Maine, on Feb. 1st, Thomas Haran Ellis, M.D., third son of T. B. Ellis, Pembroke, and son-in-law of William Wedd, M.A., aged 27 years.

WADE—At Dunchurch, Parry Sound District, on Wednesday, 5th February, 1896, Dr. W. R. Wade, aged 32 years.

ATKINSON—On the 24th February, 1896, at Hamilton, John Sangster Atkinson, M.D., of Gananoque, Ont.

MCFARLANE—At his late residence, 26 Gerrard-st. east, on Saturday morning, Feb. 29, Laughlin McFarlane, M.D., aged 56 years.

DR. LAUGHLIN M'FARLANE.

The Canada Lancet.

VOL. XXVIII. | TORONTO, APRIL, 1896. | No. 8.

TWO CASES OF MOVABLE BODY IN THE KNEE-JOINT.

By Geo. A. Bingham, M. B., Toronto,

Associate Professor of Clinical Surgery, Trinity Medical College, Toronto.

Case I.—J. T., æt. 46, a foreman printer, consulted me on January 7th, 1895, in reference to a difficulty in the left knee-joint. The history he gave was as follows: Both father and mother suffered from rheumatism as long as he can remember. His only sister is also a sufferer, and he himself has had occasional light attacks during the last ten years. About six months ago he noticed the knee somewhat larger than its fellow, and it appeared to him as though fluid was present in the joint. From that time onward he wore an elastic knee-stocking, and though the knee would feel very tired after a day's work, he did not trouble himself further about the matter. Two months after his first observation, while walking home from his office, he was seized with a sudden unbearable pain in the joint, fell to the pavement and had to be assisted home in a carriage. When I saw him an hour later, he was lying comfortably in bed, with his leg flexed almost to a right-angle, and he declared he would not extend it for the world, as it would bring back the pain. Suspecting a movable body in the joint, I failed to discover it on manipulation, and gradually extended the limb. Explaining the probable nature of the case, I urged him to watch carefully for the foreign body, and if he discovered it or had another seizure, to let me know.

He declined to consider operative procedure at this time, and I saw no more of him until he called at my office on January 7th, when he said he had had three additional attacks since the first one in September last, and was able at times to feel a movable body at the inner side of the patella. He had begun to dread the recurring attacks so much, that he had called to ask me to remove the offending mass. On examination, the joint gave evidence of fluctuation, and there was a difference of one and a-half inches in the circumference of the two joints. By manipulation, combined with flexion and extension, I was able after some time to locate the body at the inner border of the patella. Taking care that he had carefully weighed the possible dangers of the operation, I removed it the following day at his home. Using cocaine anæsthesia, I made an incision parallel with the inner border of the patella down to the body, which I was able to locate, and, by firm pressure with the fingers, to hold in position. Seizing it with tenaculum forceps, I slightly incised the synovial sac and squeezed the body out of its position into the wound, at the same time giving exit to a considerable amount of synovial fluid.

The body—measuring three-quarters inch long, half inch broad and half inch thick—was still held by a narrow pedicle, which was snipped off close, the wound flushed with bichloride solution, the synovial incision closed with two fine catgut sutures, the superficial wound closed with silkworm gut, the surface dusted with iodoform and covered with iodoform gauze. Plenty of aseptic dressing and absorbent cotton was placed over this, and a fairly firm bandage completed the dressing. The limb was placed on a posterior splint and union by first intention resulted.

Just fifteen days afterwards the limb was en-

cased in a light plaster-of-Paris bandage, which he wore for a fortnight, during the last week of which he was at his work. The joint has returned to its normal size and he has had no further trouble.

Case II.—J. F., æt. 40, consulted me on April 16th, in reference to a pain in the left knee. The family history given was excellent. Absolutely denies any tubercular or syphilitic taint. Enjoys good health, with the exception of a large goitre, which somewhat interferes with breathing at times. All her teeth have recently been removed, having decayed very rapidly of late years. Patient is stout and anæmic. A few weeks ago, while turning in bed, she suddenly felt an intense pain in the knee, the leg became flexed and she was unable to extend it for an hour. Her knee was sore for a day or two, but she went about as usual. Ever since that time she has had occasional attacks, which invariably occur when she is sitting or lying down; no difficulty when walking about.

On examination, I was able to locate the foreign body over the external condyle of the femur. Explaining the difficulty, she begged for the operation, which was done under chloroform (the patient being exceedingly nervous) on April 18th. The body was the size of a large bean. In this case, also, the deep wound was closed with catgut and the superficial wound with silkworm gut.

On the 5th day, indications of suppuration were present and the superficial stitches were removed. Burrowing of pus continued in spite of every effort. From time to time counter openings were made and the sinuses packed with iodoform gauze, after being flushed out thoroughly from day to day. Dr. Teskey, in consultation, agreed with me that some cachexia must exist, possibly syphilitic. Under large doses of the iodide she improved considerably in health, but the local condition has not appreciably improved. Up to this date (May 24th) the synovial sac does not appear to be invaded, the deep wound having evidently united. The case is still under treatment.

The origin of these bodies, as described by Barwell in his work, is as follows:—

1. Hypertrophy of and changes in synovial fringes, which by pressure may become converted into a cartilagenous mass.

2. Metamorphosis of extra-synovial tissue by inflammatory changes, the resulting mass being gradually forced into and ultimately becoming free within the synovial sac.

3. Osteophytes growing from the end of the bone, intruding into the joint cavity and working loose.

4. Effused fibrin or blood-clot deposited in the joint, as the result of injury, and becoming organized.

5. Ecchondrosis — growth of a pedunculated tumor from an articular cartilage.

6. Portions of normal cartilage detached by injury; and we may add,—

7. Detached semilunar cartilage.

I am anxious to know if the experience of others coincides with my own experience and observation, viz.: that this condition occurs most frequently in those with some cachexia. I am inclined to think this is true in classes 1, 3 and 5, and that it should modify our treatment somewhat.

In cases where a gouty, rheumatic, tubercular or syphilitic tendency is discoverable, I shall hereafter hesitate to operate; at all events, before submitting my patient to a thorough course of constitutional treatment, and this I shall persistently carry out after operation.

The points in the operative treatment which I wish to emphasize are:—

1. Rigid asepsis. By this means we will reduce to a minimum the mortality given by Barwell, of 21 per cent.

2. Defer opening the synovial sac until the body is isolated and controlled.

3. The smallest possible opening in the sac, consistent with the removal of the body.

4. Closure of the deep wound by independent absorbable sutures.

5. Fixation of the limb after operation.

6. Finally, the patient must decide voluntarily in favor of the operation, after due consideration of possible danger.

After much smoking the mouth feels like a furnace. To relieve this add to half a tumblerful of water a teaspoonful of a solution of salol, 4 grains; tincture of catechu, 20 minims, in an ounce of any nice aromatic tincture and use as a wash. —*Chemist and Druggist.*

FIVE YEARS' EXPERIENCE WITH THE COLD-BATH TREATMENT OF TYPHOID FEVER.

By William Osler, M.D.,
Professor of Medicine in the Johns Hopkins University, Baltimore.

During the first year of the hospital service, typhoid fever was treated symptomatically. The number of severe cases admitted was unusually large, and there were eight deaths among thirty-three patients—a percentage of 24.2. For the past five years, ending May 15th, 1895, systematic hydrotherapy has been used—the method of Brand, with certain minor modifications. In the first Report (Vol. IV.) the plan was given; but I may repeat here that each patient receives a tub-bath of twenty minutes at 70° every third hour, when the rectal temperature is at or above 102.5°. Frictions are applied in the bath, and a warm drink or a stimulant is given afterwards. In a large proportion of the cases no other treatment is employed. If the pulse is feeble whisky is given, and strychnia. The diet is either wholly milk or in part broths, and egg albumen. It may be noted that all the cases come under my immediate care, or, in my absence, that of Dr. Thayer, the Associate in Medicine.

In estimating the value of any plan of treatment, it is important that all circumstances should be taken into account. In the previous report I dealt with the statistics as so many patients admitted, of whom so many died; and this, I think, should be done in all institutions—give the total number of cases of each disease treated to a conclusion, and the number of deaths, irrespective altogether of the length of stay in the hospital, or the condition on admission. General hospitals are everywhere liable to be repositories of the more severe or troublesome cases, and in typhoid fever, more particularly of protracted cases in which serious symptoms have developed late in disease. A high rate of mortality in any given acute disease may be an indication of a special usefulness of the institution. As already given, the general statistics of the hospital in typhoid fever are:

Cases admitted during the six years ending May 15th, 1895	389
Number of deaths	34
Percentage of mortality	8.7
Cases admitted before the introduction of hydrotherapy	33
Number of deaths	8
Percentage of mortality	24.2
Cases admitted since the introduction of hydrotherapy	356
Number of deaths	26
Percentage of mortality	7.3
Number of cases bathed	299
Number of deaths in the bathed cases	20
Percentage of mortality in the bathed cases	6.6

The percentage 7.3 represents the total mortality during the past five years; but as it does not represent the mortality of the cases treated by hydrotherapy, the figures must undergo a further analysis. Many circumstances interfere with the systematic carrying out of the plan, among which the following are the most important.

In the first place, a number of cases are admitted in the second week, and even in the third week, with a falling thermometer, and the fever constantly below 102.5°. Cases, too, are admitted early, which have low temperatures and mild symptoms throughout. Brand and others urge that these should also be bathed; but in a large proportion of all such cases, this seems superfluous. There are exceptions, however,—cases in which the fever is low on admission, and even remains low for a week or ten days, to be followed by active and threatening symptoms. Nos. *XXII* and *XXIV* of the fatal cases were of this kind, and in both we could not but regret that the baths had not been used from the outset. In the very mild cases, more frequently in private than in hospital practice, the baths are unnecessary. Last year we admitted an unusually large number of such mild cases.

In the second place patients are admitted late in the disease, and are too ill to bathe. A patient brought in at the end of the third week, with high fever, rapid, feeble pulse, meteorism, and diarrhœa, stands, I believe, a much better chance, with careful sponging, to reduce the fever, than

he does with tubbing every fourth or fifth hour, and the disturbance unavoidable in the lifting out of bed. There were five patients admitted in too feeble a condition to bathe, not one of whom died.

Thirdly, there is a group of cases which on admission present serious complications—hæmorrhage, signs of perforation, very intense bronchitis, pneumonia, pleurisy or intense meteorism with severe diarrhœa. On account of hæmorrhage the baths were postponed on several occasions. There was no instance in which on admission the pulmonary symptoms seemed to contraindicate the treatment.

Fourthly, there are cases which were not bathed at first because the diagnosis seemed doubtful. Two of the fatal cases, to which reference will be made shortly, were not recognized clinically as typhoid fever. Each autumn we have a certain number of cases of malaria which present features closely resembling typhoid fever—so much so that baths have been given. These are instances of the so-called æstivo-autumnal fever, in which the organisms may at first be difficult to find. In other instances with a strong suspicion of malaria for a day or two, the symptoms of typhoid fever have developed subsequently, but the temperature meanwhile has fallen below the bathing point. In several cases the condition at first resembled tuberculosis.

And lastly, the baths have been frequently changed to cold sponges, on account of hæmorrhage, profound weakness, tenderness and swelling of abdomen, signs of perforation, and in a few cases because of the active protestation of the patient. The sponging, when thoroughly done, is almost as formidable a procedure as the cold bath; indeed, we have had patients ask to have the baths resumed.

The following are among the most important reasons which caused transient suspension of the method: Hæmorrhage, 13 cases; perforation, in which condition even sponging is rarely allowable, but in which the extremities may be bathed without disturbing the patient; on account of great weakness and prostration, 11 cases; on account of active mental symptoms, for one day in one case, for two days in another; for extreme tenderness of the abdomen, for one day, one case; for severe bronchitis, for intense laryngitis, after operation on abscess of parotid, for severe phlebitis, for pleurisy, each one case. In many of the fatal cases the baths were suspended for twenty-four, sometimes forty-eight hours before death.

There were several instances in which the symptoms of relapse were so slight that the treatment was not rigidly enforced.

Of the 356 cases treated during the five years, 299 were bathed, of these 20 died, a mortality of 6.6 per cent.

Of the 57 cases which were not bathed for various reasons, usually because of the mildness of the disease, six died, a percentage of 10.3. This high ratio of mortality in the unbathed cases is, of course, due entirely to the circumstance that conditions mentioned below, interfered with the use of the baths in a group of cases of unusual severity. In the six fatal cases, the histories of which are given in full in another place, in two, *Cases, XI* and *XVIII*, the diagnosis was wrong; in the one an old man of 70, with consolidation of the lower lobe, the disease was thought to be lobar pneumonia; and in the other, the patient had been in the hospital the year before with enterocolitis, and on re-admission with severe diarrhœa, typhoid fever was not suspected.

In *Case XXVII* the disease was at first thought to be tuberculous cerebro-spinal meningitis—the temperature was low, the nervous symptoms marked, and it was not until parotitis developed that our suspicions were aroused about typhoid fever.

In *Case XXVIII*, after twelve days of moderate fever, severe symptoms developed, with tympany and abdominal tenderness and diarrhœa. It was thought best to use the cold sponges; death was probably due to perforation.

In *Case XXXII* the patient was admitted, bleeding profusely from the bowels, and

In *Case XXXIII* the fever was low, only touching 104° at entrance, and subsequently not rising to bathing point. Death occurred from thrombosis of the middle cerebral arteries.

Two advantages are claimed for hydrotherapy in typhoid fever—a mitigation of the general symptoms of the disease, and a reduction in the mortality. Our experience during the past five years bears out these claims.

In general hospitals, to which cases rarely are admitted before the end of the first week, the full benefits of the cold bath, as described by Brand,

cannot be expected; nevertheless, in any large series, the severer manifestations appear to be less common. As has been urged so often and so ably by many writers, the beneficial action is not so much special and antipyretic as general, tonic, and roborant. The typhoid picture is not so frequently seen, and we may have twenty or more cases under treatment without an instance of dry tongue or of delirium among them. It is a mistake to claim, as do the too ardent advocates of the plan, that severe nervous symptoms are never seen. I have taken the pains to go over carefully our records on this point. There were in the first three years thirteen cases, in the past two years nine cases with delirium. Most of these were protracted cases which had from 75 to 120 baths.

A far more important claim is that the use of the cold bath reduces the mortality from the disease. The comparison of death rates as a measure of the efficacy of any plans of treatment is notoriously uncertain unless *all* the circumstances are taken into account. In our own figures for the past five years, for example, illustrate this—6.2 per cent. in the bathed cases, 10 in the unbathed cases—as the latter group is made up entirely of cases entirely too mild to bathe, and six patients in whom either the disease was not recognized or who were too ill on admission to treat.

Statistics have a value in this connection only when the figures on which they are based are numerous enough to neutralize in some measure their notorious mobility. Small groups of cases are useless; 24 per cent. of mortality in our first year in thirty-three cases, and a series of nearly fifty bathed cases without a death, illustrate the liability to error in discussing a few cases. Unfortunately, typhoid fever is a disease in which the cases may be reckoned by hundreds and thousands, and the average mortality in general and special hospitals throughout Europe and America is easily gathered. The rate may be placed between 15 and 20 in each hundred cases. In the Metropolitan Fever Hospitals, London, the death rate as given in the Report for 1893, was 17 per cent.

The cold-bath treatment, rigidly enforced, appears to save from six to eight in each century of typhoid patients admitted to the care of the hospital physician.

While I enforce the method for its results, I am not enamored of the practice. I have been criticized rather sharply for saying harsh words about the Brand system. To-day, when I hear a young girl say that she enjoys the baths, I accept the criticism and feel it just; but to-morrow, when I hear a poor fellow (who has been dumped like Falstaff, "hissing hot" into a cold tub), chattering out malediction upon nurses and doctors, I am inclined to resent it, and to pray for a method which may be, equally llfe-saving, and, to put it mildly, less disagreeable.

SURGERY

IN CHARGE OF

GEO. A. BINGHAM, M. B.,

Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children. 68 Isabella Street.

CARCINOMA OF THE BREAST.

The first case I shall show you to-day is a carcinoma of the breast of two years' standing. The important point in the history of the case is the advice given—unfortunately too commonly—regarding the matter of operation. At that time the disease was in a small area situated near the surface, and close to the nipple. Her physician advised against operation until she began to suffer pain. This reminds me of a case in which a physician brought to me a woman suffering from very extensive carcinoma of the breast, and remarked that he had been observing it for about a year, and congratulated himself that he had brought her to me at just the right time for operation. While in the present case it is our object to relieve the patient of an ulcerating process, our main object is to prevent a recurrence of the disease. The ulcerative cases I look upon as less favorable than others for two reasons, viz.: (1) The opportunity for doing an aseptic operation is not so good; and (2) the presence of ulceration in the skin itself shows a tendency to skin involvement, and I think one is more likely to find the lymphatics of the skin involved to a greater or less extent than occurs in other cases.

The operation that I shall do will be the one that I have been employing for about a year past. It is a very extensive operation, and the object of it is to remove all the tissues that are apt to contain deposits of the disease, or are likely at some subsequent period to become the seat of recurrence. Any procedure which falls short of gaining these objects is radically defective. The operation will be done in such a manner as to remove all that portion of skin which is likely to contain cancerous elements. It will then be carried on so as to remove all the contents of the axilla, because in the axilla and in its connective tissue are numerous lymphatics which will otherwise carry the disease up into the neck and adjacent parts. We shall also remove the pectoralis major muscle and the pectoralis minor with, perhaps, the exception of a small portion of the latter. One reason for removing these muscles is to allow of perfect dissection of the axilla, which cannot be done even by the most expert operator without their removal or displacement. Another reason is that very many minute lymphatic vessels are found running down from the seat of disease underneath the pectoralis fascia and the muscles. Microscopical examination, even after apparently a most thorough dissection, will show, usually, that unless these muscles are removed, some of the diseased tissues or infected lymphatics have been allowed to remain. No patient upon whom I have operated by this method has died from the effects of the operation, and they have all made good and rapid recoveries. There has also been excellent motion of the arm, and the whole result has been very gratifying indeed.

You can readily belive that a discharging, ulcerated area infects the skin in the vicinity to a much greater degree than where there is no such ulceration; for this reason we must be particularly careful about disinfecting the skin in the region of operation. A very good way of disinfecting the ulcerating area is by the application of thermo-cautery, and this is the plan which I shall adopt in the present case. The general plan of operation is to uncover the tendenious borders of the axilla, anteriorily and posteriorly, and subsequently to uncover the whole of the pectoralis muscle. I have now exposed the wall of the thorax, and shall proceed to make the innermost incision, which is practically outlined by the sternum. Although it is desirable to get as far away from the breast as possible, and, therefore, to make the flaps thin, they should not be made so thin as to endanger their vitality. The dissection can be made in two different ways, viz.: (1) The method recommended by Halsted, beginning at the sternal end of the pectoralis major, separating the muscle and approaching the axilla; and, (2) the method recommended by Meyer, to uncover in the first place the outer edge of the axilla, the part close to the vessels, and then explore the axilla from without inward, working towards the sternum. I consider the latter method decidedly preferable. Having thoroughly exposed the parts in this way, using my finger as guide, I divide the pectoralis major muscle, and carefully dissect it up from the axilla inward towards the sternum, following the axillary vein closely. During and after the dissection it is well to irrigate the field of

operation occasionally vith normal salt solution. It is true that this method of operating makes a monstrous wound, but the amount of blood lost is slight, and none of my patients upon whom I have operated in this way have suffered from acute anæmia, or greatly from shock.

I have now removed the whole breast, the surrounding area of skin, the whole pectoralis minor muscle, and the connective tissue in the axilla. These are the tissues especially likely to be the seat of recurrence of the disease. You might think that these patients would be greatly disabled by such an extensive removal of muscle, but such is not the case; on the contrary, the motions of the arm are exceedingly good shortly after the operation; all the motions can be made with comfort, although, of course, the muscular power of the limb is diminished. The incisions are not made with reference to the closure of the wound, but with reference solely to getting rid of all the disease. If we cannot bring the parts together completely, the open portion can be grafted with skin after two or three weeks. This might be done at the time of operation, but would prolong it unduly. I attach great importance to the accurate opposition of such skin flaps as one intends to bring together, and although it is a slow process, it is one which well repays the surgeon for the additional time and laber expended. I find that I can secure a satisfactory coaption of the edges of this large wound. Having done this, a drainage tube is inserted, and the wound once more irrigated with salt solution before the application of the usual dressing of sterilized gause and cotton. These cases all do better under very bulky dressing, and especially, the first dressing. I think one can hardly be too generous in his application of a compress or covering in these extensive flap operations. Notwithstanding the length and extent of the operation, the patient's pulse appears to be perfectly normal.—Charles McBurney, M.D., *in Inter. Jour. of Surg.*

CŒLIOTOMY WITH AND WITHOUT DRAINAGE.

Dr. Czempin refers to the great fluctuations of opinion of authoratative operators, and notes that drainage is being less and less employed each year. He refers to the method advised by Sänger (the glass drain) and Mikulicz (the iodoform-gauze drain), and also to the indications for drainage as pointed out by Veit, Olshausen, and Martin. He notes that Sänger employs this form of drainage no more; that he has practically discarded drainage; that Veit believes the indications are very few; and that opinions are so varied that there are no fast rules to follow in any particular case. Czempin, through a period of nine years of operative work, has at times followed the advice of each of the above investigators, and has carefully followed the subject. He has found that each year fewer cases require the drainage-tube. From his observations the cases in which drainage may be indicated are divided into two great groups. First, operations upon non-infectious tumors, with unfavorable complications caused by the condition of the relations of the operation wound. Second, operations upon infectious tumors or those thought to be infectious, and operations complicated through injury to the intestine, the escape of pus or decomposed fluid. First, complicated non-infectious operations. To this group belong (*a*) intra-ligamentary-developed new growths resulting in the necessary extensive separation of the pelvic connective tissue; (*b*) where the new growth has extensive adhesions with neighboring organs and the parietal peritoneum, therefore necessitating extensive injury to the peritoneum. Under these headings the writer reports a series of cases with results which vary too much to be of practical use. In the first group, the separation of the pelvic connective tissue and the extensive wound results in the formation of the best culture medium for infectious organisms, and that infection takes place either through faulty technique, infection from without, or through intestinal bacteria, the result of injury to the intestine. He says that it is doubtful whether drainage does good in these cases; that the resulting exudate is quite as readily absorbed and eliminated by nature. As regards the second group of cases, he refers to the statistics of Zweifel of one hundred and three adnexa operations, with one death, where the rubber drainage-tube was employed, but says it proves nothing. The method of Schauta, Wertheim, and Fritsch (the microscopical examination of pus during operation) he believes has the correct object, but is not positive; that the organisms may not be virulent, they may be few in number and not found, and a certain number of cases are thus unnecessarily drained. The use of drainage complicates the operation, often causing suppuration in the abdominal wound, fistula, and hernia. Finally, he concludes that the result in complicated cœliotomy is only rarely improved by the use of drainage, and that in the greater number of cases where it is used it is not essential. If virulent organisms are present, it can scarcely save life; if the virulence is extinct, it is not necessary. Where in the removal of a non-infectious new growth the pelvic connective tissue is separated, drainage is not only unnecessary, but often does harm. Where there is a closed-off acute inflammatory process in a tumor in the peritoneal cavity, infection is to be feared. Particular caution should be taken that the least amount of the peritoneum is infected, and the

material should be carefully removed with the sponge. The use of the iodoform-gauze tampon does not physically or chemically influence the result. The opening of acute inflammatory connective tissue in adnexa operations is very dangerous. Whether drainage can save the patient's life is questionable. In such cases he believes complete hysterectomy gives the best results. In adnexa operations he advises that the operation be performed six months after the last exacerbation. In cases in which the pelvic connective tissue is widely separated in the removal of a tumor (hæmatoma of the broad ligament) drainage is not necessary. In very difficult operations, where the pelvic connective tissues is widely separated and the case is septic, the best results are gained by complete hysterectomy and drainage with iodoform gauze through the vagina.—*University Medical Magazine.*

SURGICAL SUGGESTIONS.

Dilatation of Urethra.—A large percentage of female patients suffering with subacute vesical symptoms, such as painful micturition, bearing-down sensation, and a feeling that the bladder is not emptied after micturition, can be readily relieved by dilatation of the urethra. The greatest amount of practical good that has been obtained in bladder troubles by the use of the cystoscope may be attributed to the dilatation necessary to the introduction of the instrument.—Baldy.

Facial Paralysis.—1. Facial paralysis usually attributed to cold is frequently caused by mild otitis media. 2. This otitis is due to a pharyngo-rhinitis. 3. The aural origin of facial paralysis accounts for a number of symptoms not otherwise easily explained—pain, etc. 4. The prognostic significance of this etiological fact is very great, for usually facial paralysis of aural origin is readily cured.—Launois, *Ann. des Mal. de l' Oreille et du Larynx.*

Frost Bites.—

℞—Ichthyol,
Resorcin,
Tannic acid, ... āā 1.00
Water, ... 5.00—M.

Apply with a brush at night.

Should this, for one reason or other, be objectionable, the following formula may be substituted:

℞—Resorcin, ... 2.00
Mucilage of gum arabic,
Water, ... āā 5.00
Powdered talc. . . . . 1.00—M.

Apply topically with a brush. —Boeck.

Amputations.—I have always held that a circular skin flap, with or without a lateral incision, as the emergency may demand, is the ideal flap, the muscles being divided an inch or more above the level of the circular incision through the skin, and the bone sawed on a level with the muscle. Dissection of the periosteum from the end of the bone in order to secure a periosteal flap is entirely unnecessary and should not be done.—Wyeth.

Tumors.—Every tumor first noticed in the breast after the thirty-eight years' epoch is, in the great majority of cases, primarily malignant; in the remainder it is certain, sooner or later, to become associated with malignant features in one form or another.—Snow.

Aneurism.—Hydrated calcium chloride in doses of about a drachm a day, in conjunction with rest and other suitable adjuvant measures.—Cohen.

Furunculosis.—Extract of colchicum, in doses of from 2 to 4 cgm. (gr. $\frac{1}{3}$ to gr. $\frac{2}{3}$), in conjunction with topical applications of spirit of camphor. —Brocq.

THE TREATMENT OF TUBERCULOSIS IN CHILDREN WITH IODOFORM INJECTIONS.

Wieland *(Deutsche Zeitsft. Chirurg.)* finds the conservative treatment, with ten per cent. iodoform injections, of tuberculosis of the soft parts, bones and joints, much more satisfactory in children than in adults; and analyzes in support of this view the report of the Children's Hospital of Basle for the last five or six years.

He finds tuberculous abscesses treated in this way healed very often. The method employed was to empty the abscess with an aspirator, then irrigate with a 4 per cent. boracic acid solution, and, after the cavity had been well washed out, to inject 20 to 50 ccm. of a 10 per cent. iodoform emulsion, either in glycerine or oil or in water, adding a small quantity of gum arabic to hold the iodoform in suspension. As often as the abscess refilled, the operation was repeated.

It is essential to keep the part treated at rest, and to firmly support it with a flannel bandage.

Of twenty-one cases treated in this manner, sixteen, or 80 per cent., were fully cured, four were removed from the hospital by parents before treatment was completed, and one case was a positive failure. In eleven of the sixteen successful cases one injection sufficed; in one two were necessary; and in four the patient required three injections. Fistulæ at the point of injection occurred four times and once there was septic infection of the large abscess.

Twelve cases of joint tuberculosis were treated in this way. Nine, or 75 per cent., were cured, and two were much improved. Joint cases required from six to thirteen injections given during a period of two to six months.

Four cases had acute nephritis from the iodoform, which, however, speedily disappeared. In one case there was severe iodoform intoxication, but in this case 20 per cent. emulsion was employed.—*Kansas Med. Rec.*

Surgical Hints.—When a wound, either accidon't dental or operative, shows signs of infection, wait for suppuration. Immediate incision, thorough disinfection, and drainage, if necessary, relieve pain, shorten the duration, and prevent extension of the inflammatory process.

In draining a suppurating wound, never cork it up by packing gauze in it. The smallest strip that will reach the bottom of the cavity, very loosely applied, is the best.

Constitutional treatment is all-important in all forms of diffuse surgical inflammations.

Recurrence of carbuncles and boils suggests an examination of the urine for diabetes.

See that patients have a good nights's sleep the night before an operation.

Skin grafting will not succeed upon an unhealthy surface.

Watch patients with burns of the pharynx and larynx: be ready to operate at once. Severe dyspnœa may occur with appalling suddenness. If the patient is getting cold and feeble, his ability to feel pain has greatly disappeared. Waste no time in anæsthesia in emergency tracheotomies.

Remember that the skins of young children and delicate women may be blistered by 1 to 1,000 solutions of bichloride of mercury, and that 1 to 40 solutions of carbolic acid have produced gangrene of fingers and toes, when used in wet dressings.

When first attending a case of urinary retention due to prostatic enlargement, it is a very common mistake to endeavor to empty the bladder with very small catheters, and this very often fails. A large catheter will frequently pass much more easily, and should always be tried first.

In case of severe orchitis, acupuncture generally gives great relief. Use a strictly clean, long needle, with a cutting point. This must rapidly be thrust two or three times through the substance of the swollen testicle. The procedure gives, when skilfully done, much less pain than might be imagined.

In local inflammations of a septic character, the external application of iodine is worse than useless.

In hydrocele, the tenseness of the sac, and not its size, is the indication for operation. Never introduce the trocar obliquely, but perpendicularly to the surface.

An ice-bag left all night upon an inflamed surface has been known to produce extensive sloughing of the parts. The skin under an ice-bag should be frequently inspected.

The tissues of the ear are possessd of a great degree of vitality. If a portion of the ear has been so cut as to hang by nothing but a mere shred, it is always worth while to stitch it in position again, suturing cartilage to cartilage, and skin to skin, separately, whenever possible.

Tincture of arnica, except for the alcohol it contains, is believed to possess absolutely no value as an external application. It sometimes produces an amazing degree of cutaneous irritation and inflammation, sometimes even assumming an erysipelatoid character.

Never give a good prognosis in the case of very extensive burns in children, however well they may appear a few hours, or even a day or two after the receipt of the injury. Sepsis usually followed by pneumonia and shock often develops late, and the mortality is very great.—*Inter. Jour. of Surg.*

Ulcers of the Leg; All can be Cured.—This paper was read by Dr. Carter S. Cole, of New York. Whatever constitutional conditions obtained that favored morbid states, or that retarded a return to a healthy state, he said, such a diathesis should receive its proper treatment, whether ulcers exist or not. For systematic purposes, ulcers of the leg were designated by the author according to their appearance as healthy, irritable, indolent, etc. In intractable cases, he was inclined to place foremost thorough washing with soap and water and good scrubbing with a stiff-bristle hairbrush. If the ulcer was inflamed, irritable, or painful, anæsthesia might be required for this and subsequent steps. The next step was a thorough cleaning out of all soft granulations and the base of the ulcer with a sharp curette. The edges of the ulcer were scraped away, and in many cases with a curved sharp bistoury he nicked the circumference at intervals of about a quarter of an inch. If much hæmorrhage followed, a pad of gauze wrung out of a two-per-cent. solution of carbolic-acid was placed over the wound, and a firm compression bandage applied from the toes to knee, the wound having been previously cleansed with the carbolic-acid solution. The dressing, when used, was allowed to remain for twenty-four or forty-eight hours, after which he considered the ulcer to have become a simple one and amenable to treatment as follows: No further lotion was used. The wound was wiped off with dry cotton, and over it and completely covering it he placed strips of diachylon plaster to protect the ulcer. Over the surgeon's plaster he applied a pad of sterilized

gauze, held in place by strips of rubber adhesive plaster, or often simply by a bandage. He then used a firm muslin bandage from the toes to the knee, making equable compression. The bandging should be carefully done. Sometimes he used two bandages three inches wide and eight yards long. This bandage was not removed unless the discharge came through, or the leg became painful, or the bandage got loose. When he redressed the ulcer he again used simply dry absorbent cotton to cleanse the wound, and proceeded as before. Often after two or three dressings the bandage might remain from five to seven days without being disturbed. In some cases a thin scum formed on the ulcer, which must be removed by going over the surface lightly with a curette. With this treatment, in ordinary cases, about three weeks would suffice for an ulcer of even a dozen years' standing. In extraordinary cases as much as six weeks might be necessary.—*New York Med. Jour.*

TREATMENT OF CHRONIC HYDROCEPHALUS.—Dr. Raczynski concludes as follows with regard to the value of punctures in chronic hydrocephalus: 1. Puncture is not a dangerous procedure, if carried out under antiseptic precautions, and if the fluid is evacuated in small quantities at intervals of several weeks. 2. The employment of permanent drainage is more dangerous than evacuation of the fluid by puncture or even aspiration. 3. Although the results thus far obtained have not been brilliant, the statistics will improve when the operation is resorted to at an earlier stage, before much thinning of the brain substance has occurred. The most difficult question to decide is in what cases and what period an operation is to be undertaken. It is known that some of hydrocephalus get well spontaneously, while others, with marked enlargement of the head, live for many years; on the other hand, if left to itself, the disease often gives rise to the most unfortunate results. By interfering too early the surgeon exposes himself to the reproach of having performed a perhaps harmless, but unnecessary operation; while by delaying it may be inefficient. According to the author's opinion, puncture is indicated in those cases in which in a previously healthy child symptoms of hydrocephalus rapidly develop; if a progressive enlargement of the head is distinctly noticeable; if marked bodily or mental impairment be threatened; in short, if we have everything to gain and nothing to lose.—*Internat. Jour. of Surg.*

CASE OF DOUBLE LIGATION OF THE VASA DEFERENTIA FOR HYPERTROPHY OF THE PROSTATE.—The patient was a cab-driver, aged seventy, married. For nine or ten years he was troubled with frequent urination. Five years ago he had a sudden attack of retention with constant dribbling, which yielded to Sitz baths, rest, and catheterization. Afterward involuntary dribbling from overdistention troubled him at times, and frequency was greater than it had been before. Two weeks ago he was attacked similarly, and after five days' treatment as before was sent into the hospital. The prostate was symmetrically enlarged to about the size of a billiard-ball. After about three weeks' rest in bed with regular catheterization, the patient showed no improvement. Ten minims of a four-per-cent. solution of cocaine were injected into the tissue around the spermatic cords, close to the external abdominal ring. The vasa deferentia were separated to the extent of an inch from the cords, and double ligatures of fine silk were placed a quarter of an inch apart on each vas. The vas was not severed. The wounds were sutured and the usual iodoform dressing applied. For seven days after the operation all urine was drawn as before. On the seventh day, about two drachms passed voluntarily. Improvement continued, and the patient reports himself feeling better than during the last ten years. I frequently test the amount of residual urine, and find it to vary from three and one-half ounces to two ounces. The prostate is about the size of a duck's egg.—*Med. and Surg. Reporter.*

NOTES ON A SERIES OF ONE HUNDRED CONSECUTIVE CASES OF APPENDICITIS. — A paper on the above subject by Dr. Robert T. Morris was read before the New York Academy of Medicine. The death rate had been two per cent., the hernia rate zero. Acute appendicitis with abscess, 34; chronic appendicitis with abscess, 4; acute appendicitis without abscess, 12; chronic appendicitis without abscess, 40. The others were cases of tuberculosis and cancer. Females, 24. Of the 38 abscess cases 2 died, one from suppurative nephritis, the other from septic peritonitis. The appendix was removed in all but 5 of the acute cases. One case of fæcal fistula had not yet closed. In all the acute cases he followed the general plan of the smallest useful incision. He cleansed the abscess cavity with peroxide of hydrogen and salt solution, and sutured the abdominal walls separately and accurately. In his hands he thought the use of gauze packing and opium would probably have lessened the favorable results. None of his cases without abscess had died or had had post-operative hernia. In two cases the appendix had become twisted upon itself, narrowing the lumen, which was distended with mucus. He had made it a rule on arriving at a diagnosis of appendicitis to operate, no matter what the stage. The appendix was like a cap which might snap and cause an explosion, and nobody could tell in advance just what might happen in a particular case.

Appendicitis and Rheumatism.—Dr. Beverley Robinson said he believed to-day even more strongly than he did about two years ago, when he expressed the opinion for publication, that in many instances the only correct interpretation of appendicitis was the recognition of an underlying rheumatic condition. He did not wish it understood that he was opposed to surgery; he believed that at a certain stage of the disease it was the only means of saving life. But before that stage had arrived many patients could be cured by anti-rheumatic treatment, just as many cases of tonsillitis responded to such treatment when without it local measures seemed ineffectual. Salicin, salol, salicylic acid, etc., were the efficient remedies in this class of cases. He believed the latest anatomical investigations showed a large amount of lymphoid structure in the cæcum, more especially in the appendix. This pointed to similarity of structure with the tonsils, which were known to reflect the rheumatic tendency. Mild laxatives, not active purgatives, were beneficial. Opium was harmful, not only because it obscured the symptoms, but also because it dried up the secretions. He felt certain that by acting on these suggestions many cases of appendicitis could be checked before the stage of suppuration and sepsis.

Dr. Gibson said Dr. Morris' results, only two deaths in one hundred, none of post-operative hernia, seemed wonderful. He did not think it was due to the method of operating. It looked as though he had had a hundred cases, the great majority of which were easy ones. The statement that there had been no case of hernia was remarkable, and it suggested the question whether he spoke of hernia in the same sense that another practitioner might. His method of closing the abdominal wound was not different from that practised by other good surgeons, who, nevertheless, had reported some cases of hernia.

Asbestos as a Surgical Dressing.—Dr. E. O'N. Kane, of Kane, Pa., recommends asbestos as a practical and useful substance for surgical dressings. These dressings, he says, may be carried in any parcel, paper bag, or hand-satchel, may be handled by dirty hands, spattered by blood or any sort of filth, and yet can be rendered absolutely aseptic in less than two minutes by tossing them upon the coals or into the blaze of an ordinary kitchen stove. After having completed an operation, and just before he is ready to apply the dressings, they are thrust into the coals or flame of the nearest stove. The same dressings can be used, if necessary, though here it is advisable to wash off some of the discharges before the dressings are burned. Repeated burnings seem to injure the quality of the material somewhat. The form of asbestos most used is the asbestos fibre, which is as soft as silk floss, and its absorbent qualities are greater than those of absorbent cotton. Asbestos wicking, packing, and cording are adapted for drainage tubes.—*New York Med. Record.*

Villous Tumor of the Rectum.—At a recent meeting of the Liverpool Medical Institute, as reported in *The Lancet*, Mr. Paul related the case of a woman, aged fifty-six years, from whom he had removed a very large villous papilloma of the rectum. Symptoms of bearing down, a constant desire to defecate, and the passage of blood and mucus had existed for five years. The growth formed a broad band two or three inches deep around the rectum about two inches and a half from the anus. The patient made a slow but otherwise good recovery. The tumor had the typical structure of villous papilloma and did not infiltrate the submucous tissue. The origin of the growth could be distinctly traced to the neck of Liebergkühn's follicles, and Mr. Paul suggested that the historical distinction between the three usual neoplasms in this situation was as follows: Papilloma commenced as an upward growth of the neck of the glands, polypoid adenoma as an overgrowth of the entire glands, and carcinoma as a downward growth of the deep portion of the follicles.

Treatment of Epidiymitis.—The affected testicle should be wrapped in lint and be moistened constantly, either with lead water and opium, or the following:—

R—Tincture of aconite,
Tincture of opium, . . . āā fl. ℥ j.
Dilute lead water,
Water, ... āā fl. ℥ ij.

—Dennis' *System of Surgery.*

A Magazine's Influence.—The enormous circulation of such a magazine as *The Ladies' Home Journal* can, in a sense, be understood when it is said that during the last six months of 1895 there were printed, sold and circulated over four million copies—(in exact figures 4,058,891). Figures such as these give one some idea of the influence which may be exerted by even a single one of the modern magazines.

Sprains of Foot.—Most successful treatment is use of hot foot-baths for fifteen minutes three times a day; follow each bath with massage for fifteen minutes; then apply snugly a Martin rubber bandage from toes up as high as ankle and have patient walk, *Railway Surgeon.* Ballet dancers use this method with such success that they are seldom incapacitated for work longer than a week.

As Sunlight is to Darkness

is the condition of the woman who has been relieved from some functional disturbance to her state before relief. Don't you know Doctor that there are few cases that pay the physician so well as those of women—and the Doctor that relieves one women, lays the foundation for many more such cases—all women talk and your patient will tell her friends. ASPAROLINE COMPOUND gives relief in all cases of functional disturbance—Leucorrhœa, Dysmenorrhœa, etc., and in the cases it does not cure it gives relief. We will send you enough ASPAROLINE COMPOUND—free—to treat one case.

DR. BRETON, of Lowell, Mass., says:

"I wish to inform you of the very satisfactory results obtained from my use of Asparoline. I have put it to the most crucial tests, and in every case it has done more than it was required to do. I recommend it in all cases of dysmenorrhœa."

FORMULA	
Parsley seed	Grs. 30
Black Haw (bark of the root)	" 60
Asparagus seed . . .	" 30
Gum Guaiacum . . .	" 30
Henbane leaves . . .	" 6
Aromatics	
To each fluid ounce.	

Prepared solely by

HENRY K. WAMPOLE & CO.

Pharmaceutical Chemists,

PHILADELPHIA, PA.

Pain Due to Antitoxine Injection Relieved and Rest in Diphtheria Secured.

"Rest is one of the sweetest words in our language, and in the management of no disease is this more true than in diphtheria. In keeping with the experience of Dr. T. E. Murrell, Ex Vice-President of the American Medical Association, and Dr. Pollack, of St. Louis, one of the most experienced practitioners of our city, who found antikamnia valuable as a reliever of the pain of nocturnal earache, I have found it of great value as a sleep producer in these cases, given in doses of two and a half to five grains every two to four hours, accompanied by a judicious amount of stimulation, such as wine or toddy. There is no after depression nor have I ever found other than satisfactory results when used." So writes Dr. I. N. Love, Professor of Clinical Medicine, Diseases of Children and Hygiene, Marion-Sims Medical College, in an exhaustive and comprehensive article entitled "SOME POINTS PERTAINING TO THE PRESENT PATHOLOGIC AND THERAPEUTIC STATUS OF DIPHTHERIA."

Dr. Eggers of Horton Place, Physician and Surgeon St. Louis and Suburban Railway System, also reports in the treatment of an attack of diphtheria in a member of his own family, that to obtund the pain consequent upon the injection of antitoxine-serum, which ordinarily lasts from three to four hours, he exhibited antikamnia internally which secured relief in a few minutes. Clinical reports verify the value of codeine in combination with antikamnia in the treatment of any neuroses of the larynx, coughs, bronchial affections, la grippe and its sequelæ as well as chronic neuroses; the therapeutical value of both being enhanced by combination. The tablets of "Antikamnia and Codeine," containing 4¾ grains antikamnia and ¼ grain codeine, meet the indications almost universally.

☞"**Surgery 200 Years Ago**" (Illustrated), also samples and literature mailed to **physicians only**, on receipt of **professional card.**

THE ANTIKAMNIA CHEMICAL COMPANY, St. Louis, Mo., U. S. A.

We Have No Hesitation

In stating that as a Tonic, Stimulant and Roborant, WYETH'S BEEF, IRON AND WINE has proven more uniformly beneficial than any combination we have ever known. It is substantially a universal tonic.

In the majority of cases, along with failure of strength, and indeed as one cause of that failure, there is an inability to digest nourishing food. Hence it is very desirable to furnish nourishment in a form acceptable to the stomach, at the same time to excite this organ to do its duty. On the other hand, again, wine stimulus, although needed, is ill borne if given by itself, producing headache, excitement and other symptoms, which may be avoided by the addition of nutritious substance, such as the Essence of Beef. Iron, also, can be taken in this way by the most delicate or sensitive woman or child, to whom it may be inadmissible as usually given.

CONDITIONS in which Physicians recommend
Wyeth's Beef, Iron and Wine:

To give Strength after Illness.—For many cases in which there is pallor, weakness, palpitation of the heart, with much nervous disturbance, as, for example, where there has been much loss of blood, or during the recovery from wasting fevers, this article will be found especially adapted. Its peculiar feature is that it combines Nutriment with Stimulus.

To those who Suffer from Weakness it is a Nutritive Tonic, indicated in the treatment of Impaired Appetite, Impoverishment of the Blood, and in all the various forms of General Debility. Prompt results will follow its use in cases of Sudden Exhaustion, arising either from acute or chronic diseases.

To Growing Children—Especially those who are sickly, get great benefit from this preparation. It builds up by giving just the nourishment needed, and in a very palatable form.

To People who are getting Old, who find their strength is not what it used to be, they experience a decidedly tonic effect from its use as occasion requires.

To Clergymen, Teachers and members of other professions, who suffer from weakness, WYETH'S BEEF, IRON AND WINE is very effectual in restoring strength and tone to the system after the exhaustion produced by over mental exercise.

For Overwork.—Many men and women know that the continuous fatigued feeling they labor under is due to overwork, still they find it impossible just yet to take complete rest. WYETH'S BEEF, IRON AND WINE gives renewed vigor, is stimulating, and at the same time is particularly nourishing.

JOHN WYETH & BRO.,
Manufacturing Chemists, Philadelphia.

DAVIS & LAWRENCE CO., Ltd.,
General Agents for Canada, Montreal.

MEDICINE

IN CHARGE OF

N. A. POWELL, M. D.,

Professor of Medical Jurisprudence, Trinity Medical College;
Surgeon Out-door Department Toronto General Hospital; Professor of Principles and Practice of Surgery, Ontario Medical College for Women. 167 College Street.

MEDICAL LIBRARIES, THEIR DEVELOPMENT AND USE.

BY JAMES R. CHADWICK, M. D.

In accepting Dr. Osler's invitation to give to you a short address upon the medical library, its development and use, at the inauguration of the new building of the Medical and Chirurgical Faculty of Maryland, I find myself handicapped by lack of time for adequate preparation and an experience which is restricted to one locality, the City of Boston. Still I have had practical knowledge of the building up of a library from a few hundred to twenty-six thousand volumes and twenty-three thousand pamphlets. The lessons learned in the twenty years of labor may not be devoid of interest and value to you.

Soon after a young man graduates from the medical school and assumes the responsibility of the lives and health of his fellow beings, he realizes the limitations of his knowledge, and looks about to remove them. He finds two principal means of adding to his meagre acquisitions, hospitals and books. Hospitals, including dispensaries, if assiduously frequented, certainly teach him more of immediate practical value than do books. But the knowledge there acquired does not always bear upon the particular case in his private practice which is causing him anxiety, and moreover the hospital has the disadvantage of being available only during certain hours of the day and of necessitating absence from his field of labor during the hours when he ought to be earning his livelihood.

To the printed words of his masters and colleagues he must consequently turn, and where shall he find them? His own few shelves contain the treatises from which he learned the first rudiments of his knowledge, but in our day every one of these is superseded in two or three years, by the rapid advance of medical science.

In the early years of practice, few men can afford to buy or even give shelf-room to a tenth part of the books that he needs; no man, whatever his means, can possibly acquire all. A library is consequently indispensable in every centre of population, or the health and lives of the community will be jeopardized by the ignorance of its medical practitioners. Could this fact be realized by the liberal men of means in our midst, self-protection, if no higher motive, would stimulate them to endow our medical libraries with as free a hand as they now evince toward hospitals. The benefit conferred upon suffering humanity would be greater, though less manifest, to the ordinary man of wealth.

Admitting then, that a medical library for the use of the profession in every community is indispensable and recognizing that we must not expect many contributions from the public, by what direction of our efforts can we procure it?

I appreciate that you do not need to be told how to make a start, for I well know that in the thirty-third year of your age (1832) you established a library in your Society under the fostering care of Dr. Samuel Baker; that in 1852 the first catalogue was published by Dr. John W. Woods; and that a few years later Dr. George W. Miltenberger raised funds for the increase of the library with such marked success that you already possess about 10,000 volumes, ranking among the larger medical libraries of the country.

As a stimulus to fresh effort to increase your already large library, I have had a chart constructed showing the yearly rate of growth of the seven largest collections of medical books in the country.

The first library to be founded was that of the Pennsylvania Hospital in 1762; there has been a comparatively steady increase to the present day, no annual enumeration having been made. It now numbers 15,007 volumes. The difficulty of procuring books in the last century and the early decade of this can be appreciated from a printed circular distributed about 1805 to the members of the Second Social or Boston Medical Library, in which it is stated that "the books ordered last year from Europe have not yet been received."

The second library in order of seniority is that of the College of Physicians in Philadelphia, which was commenced in 1788. Its curve of growth shows such great fluctuations that a brief study of them will be profitable in making evident the means by which a library is augmented. You will note that the increase was very slow for sixty years,

when in 1858, 1,265 volumes were received from Dr. Thomas F. Betton. In 1864-5 the library was almost doubled in size, chiefly by the gift of 2,500 volumes from Dr. Samuel Lewis, who from that date until his death was a constant contributor to its alcoves, the aggregate of his donations ultimately reaching the grand total of nearly 10,000 volumes. The erection of a fire-proof building in 1864 also contributed to securing many accessions. Between 1882 and 1886 the growth was very rapid owing to the recipt successively of the libraries of the late Dr. William F. Jenks, Dr, Alfred Stille, Dr. Samuel D. Gross, Dr. I. Minis Hays, Dr. John S. Perry and that of the Obstetrical Society of Philadelphia.

In 1880 to 1882 Dr. S. Weir Mitchell contributed $2,000 as a journal fund, and, later, when president, roused by his love of books and his enthusiasm the greatest interest in the library, whereby it grew rapidly. The falling off of its curve and that of the New York academy of Medicine in the 80's merely means that duplicates were thrown out. The College now contains 49,748 volumes, besides 28,384 unbound pamphlets, reports and transactions.

The library of the New York Hospital was founded in 1796, had a steady increase until 1876 when, like all the others, it took on a more rapid growth. It now numbers 22,383 volumes but has practically no pamphlets.

The library of the Surgeon-General's office in Washington, begun in 1845, grew so slowly that in 1865 it contained less than 2,000 volumes. Its increase from that date has been so phenomenal that we are warranted in pausing to seek an explanation, which is not, however, hard to find. It was in that year that a young army surgeon, Dr. John S. Billings, who had shown literary tastes and marked executive ability during the War of the Rebellion, was detailed to take charge of this insignificant collection of books. He at once conceived the idea of developing this nucleus into a grand national library. By importuning Congress year after year he secured large annual appropriations of money (the annual appropriation for the purchase of books has averaged nearly $7,000 from 1867 to 1895 inclusive), and by persistently canvassing, personally and by letters, the profession of every State in the Union he secured large donations of books. Exchanges were effected with other medical libraries not only in this country but in all parts of the world. From these two sources about one-sixth of the total number was derived. The result of his labors is the most complete medical library in the world, consisting of 116,847 volumes and 191,598 pamphlets.

The influence of this one man's work is not seen in the growth of this library only, but is made manifest by the impetus given to all existing libraries and to the formation of innumerable new ones, of which my data are still incomplete. The publication of the index-catalogue of this library, the first series of which, in sixteen volumes, was begun in 1879 and completed in 1895, will, when the new series of five or six volumes is issued, be practically an index to all the medical literature of the world up to the end of this century.

Its value to medical scholars is inestimable, superseding, as it does, all the time-wasting labor that used to be expended in bibliographical research. By its aid we obtain a reference to every rare case that has been recorded since printing was discovered in A. D., 1450. But by indexing the articles and reports of cases in every periodical, past and present, obscure and famous, this catalogue has immensely extended the scope of medical research and created a demand for an array of books and especially of periodicals that is simply appalling. What is an earnest seeker after knowledge to do when he has, for instance, a case of inflammation of the pancreas and refers to this catalogue for the writings on the subject, when he discovers a reference to a case in the *Medicinische Jahresbuchericht von Peter-Pauls Hospital in St. Petersburg*, to another in the *Bulletino di scienzia medica di Bologna*, to another in the *Moniteur scientifique* and to another in the *Zeitschrift fur die gesammte Medizin* of Hamburg, so on *ad infinitum ?* He cannot possibly have complete files of these various periodicals upon his own shelves. He must have within reach a library, in, which most, if not all, these volumes may be found or he will fail to learn all that can be learned about this subject and, as a consequence, his patient will suffer from treatment based on half knowledge.

The demand thus created for periodicals of all kinds and countries has done more than anything else to promote the growth and foundation of public medical libraries throughout our country. This publication is therefore the great factor in determining, during the past fifteen years, the rapid rise of the curves of all the libraries represented upon this chart. The pressure of the demand for an extensive literature thus created will never wane.

The library of the New York Academy of Medicine, inaugurated in 1847, had the same slow growth as all the others until 1846-7, when Dr. S. S. Purple gave to it his large collection of medical periodicals. Its subsequent rapid growth owed much of its impetus to the energy of my old and dear friend, Dr. Fordyce Barker, who, combining the wisdom of age and the enthusiasm of youth, was foremost in securing funds for a new building in 1880, when he was president. In 1890 a new impetus was given to this library by the erection of a superb new fire-proof building. This library is fast becoming worthy of the metropolis of the country. It contains 33,140 volumes and 13,000 pamphlets.

The medical department of the Public Library of Boston was founded in 1852 and has grown, by purchase and gifts, at a comparatively uniform rate. It now contains 19,609 volumes.

The Boston Medical Library Association, of which I have been the librarian since its foundation, in 1875, has had a rapid growth from the outset, chiefly because, in its early years, it took into its fold the libraries of several local societies. Its growth has been almost entirely by donations and exchange, having no funds regularly available for the purchase of books.

Its value is greater than its size would indicate for the reason that nearly 16,000 of its 26,000 volumes are periodicals, and this class of literature is of most practical value to the medical public. The completeness of our files of journals and transactions I attribute largely to the existence of the volume I hold in my hand, my "want-book," wherein, upon the left-hand page is entered every periodical of which we have any part, while on the opposite page is entered every volume or number needed to complete the file of that particular journal. By invariably carrying this with me upon my travels in this country and Europe, I have been able gradually, at a trifling expenditure of money, to complete the files of all the leading periodicals of the world. I submit this to your special attention if you know how to build up a medical library with practically no funds for the purchase of books. This library now contains 26,082 volumes, and 23,595 pamphlets.

I have sought by the analysis of these curves to indicate the principal factors in the growth of a medical library. The lessons to be drawn from this enumeration are, that if a valuable collection of books is accumulated, the profession will rally to supply for it a suitable abode; and, as my friend, Oliver Herford says, "It's a poor pill that will not work both ways," so we find that if a fine building is erected, the library will soon be forthcoming. In either and every case some one man must work early and late to secure contributions, and especially to make complete the files of periodicals.

I would not be understood as intimating that money is not needed for the building up of a library. As the Chinese say, "With money you can move the gods; without it you cannot move a man." Money and much money is needed for the maintenance of a library. The continuous service of a librarian and perhaps one or two assistants must be paid for. Many hundred volumes must be bound every year. A certain number of periodicals must be secured for your reading-rooms as soon as published, and therefore by subscription. The list of these may be supplemented immensely by securing gratuitously the exchanges of your medical journals; the journals received by your instrument-makers and manufacturing chemists, etc., in return for their advertisements; the journals circulated in journal clubs of medical men after they have gone the rounds. You may also obtain in exchange for your own *Transactions* the publications of nearly all kindred societies.

Finally, an author, subject and title card-catalogue must be kept up to date, no matter what the expense. "Who wants a lock without a key, a ship without a rudder, a binnacle without a compass, a check without a signature, a greenback without a goldback behind it?" [O. W. Holmes.]

Before closing, I want to say a word about pamphlets, with regard to which you will have noticed that policies differ widely; the New York Hospital keeps no pamphlets, the Surgeon-General's Library has sixty per cent. more pamphlets than books, the Academy of Medicine has only one-third as many pamphlets as books. Some of this discrepancy is doubtless due to different relative classifications of books and pamphlets. In order to secure uniformity, the rule of the Washington Library should be universally followed: To classify as a pamphlet everything that is unbound, up to a hundred pages, and everything that contains less than thirty pages, even though bound; to classify as a book everything above thirty pages, if bound, and everything above one hundred pages, even though unbound. This is purely arbitrary and may not be invariably followed, but it is as fair a classification as can be devised. No accurate comparison of the size of the different libraries can be made if, as in my knowledge has happened, one library counts everything above thirty pages as a book, whether bound or unbound. It may thus surreptitiously add many thousand volumes, so-called, to its aggregate of books, and take thereby an illegitimate rank among the libraries.

Pamphlets should be carefully kept and catalogued in one library in every city. They include most of the graduating theses, which are often compilations of inestimable value; they often contain the results of extensive laboratory experiments; they contain much local history, reports of special committees who have investigated water-supply, drainage, epidemics, quarantine, etc. Reprints of journal articles are of use, even though the library has the file of the journal in which they appear, because they may circulate for home-reading when the journal may not be allowed to leave the building.

Classify your library by subjects, making the sub-divisions more numerous from time to time, as the books accumulate. Do not agree to keep a man's library, if on various subjects, together as a unit, if you can help it, for you thereby break in upon your regular system of classification and make the library harder to administer and less available to the readers, besides storing many duplicates uselessly.

As to the use of the books, make it as free as is consistent with their safety. Where the users of a library are all members of an association and consequently known personally to the custodian, it is generally deemed safe to allow them free access to the shelves. All books that can be readily replaced may circulate for home reading, but not periodicals, for the loss of one volume of these depreciates the value of the whole series.

It is useful to make duplicate files, as occasion presents, of the leading periodicals for home reading. Beyond this be liberal in the disposal of duplicates; there is no market for medical books, so you may as well bank on the future, by giving freely of your duplicates to other kindred institutions on open exchange account, which is never meant to be balanced. You hereby establish a claim upon such institution for any favor it may be in position to do you in future.

But I find that I am dropping into technical details that can have no interest for any one but your librarian and committee on the library.

In conclusion, I want to parry the charge of having too prosaic a view of a medical library, of seeing only the utilitarian side of it. To the deep student, to the true lover of books, nothing that I can say will add or detract from his appreciation of it. Remember what Confucius says, "Learning without thought is labor lost; thought without learning is perilous."—*Boston Med. and Surg. Jour.*

BARBER'S ITCH.

BY HENRY W. STELWAGON, M.D.

True barber's itch, an example of which is shown in the patient now before you, is a disease of the bearded parts of the face, due to the invasion of the integument by the ringworm fungus. The disease has been, and is still, called variously parasitic sycosis, tinea sycosis, tinea trichophytina barbæ, tinea barbæ, trichphytosis barbæ, and ringworm of the beard. As it is due to the ringworm fungus, trichophyton, the proper technical term would seem to be either tinea trichophytina barbæ or trichophytosis barbæ. In connection with this case I desire to give you a brief description of the several stages or varieties observed upon this region, using a few photographs of cases which have been before you from time to time, as illustrations.

The disease most commonly begins as one or two simple patches of ringworm,—rounded areas with clearing centres and reddened, elevated, slightly scaly, papular, vesico-papular, or vesico-pustular periphery; generally the peripheral portion is merely reddened, elevated, and somewhat scaly. The disease may persist as such, the ring or rings enlarging, possibly one or more new areas arising, the older ones, at times, partly disappearing, while in some patches the infiltration and elevation at the borders become more marked. This constitutes the superficial variety of the disease. This type is not uncommon and may present one large ring-like patch, as seen in Fig. 1, or several or more variously sized ring-like areas or segments some merely epidermic scaly rings, others more inflammatory and less superficial, the borders being quite pronounced, as portrayed in the photograph just shown. The borders may also show some pustulation. In these cases, if of considerable duration, the hairs are apt to present the same characters as in ringworm of the scalp, some falling out, others invaded by the fungus, becoming brittle and breaking off, sometimes presenting brush-like ends. As a rule, however, the hair is never so conspicuously involved in ringworm of the bearded parts as in the scalp-disease. In other cases the ring or rings have scarcely time to from before the deeper tissue is involved, and then you see small areas of papulo-tubercles, at first grouped somewhat circularly, later becoming confluent, and sometimes diffused, as in the case before you. (This case is shown in Fig. 2.) In this patient on the chin and the right side of the lower jaw there are several distinctly nodular, lumpy, deep-seated areas; those over the jaw still preserving, somewhat indistinctly, their ring-like shape. On the region around the right side of the mouth, invading the upper lip,—an unusual site,—the disease consists of a markedly infiltrated swollen area covered irregularly with pustules; on the other side of the chin are a few nodular infiltrations. The disease began three weeks ago. In other cases the usual beginning stages of the disease are soon lost or even wanting, it rapidly developing into one or several, small or large, sluggish or actively inflammatory, rounded or irregular areas made of deep-seated, distinctly lumpy or nodular masses, resembling somewhat flattened carbuncles; partly covered with pustules and partly showing a glairy mucoid or sero-purulent discharge from many of the follicular openings. The surface may become denuded here and there, and exhibit a tendency to papillomatous vegetations. In this form the hairs, as a rule, soon drop out. This nodular or lumpy type of the disease is the classic type, and is well shown in Fig. 3, the whole under part of the chin and hairy neck being the seat of lumpy, nodular infiltrations. The extent involved is here large; in exceptional cases the disease may consist simply of a single small area, from half an inch to an inch in diameter, and present the appearance of a carbuncle-like abscess, as shown in Fig. 4, a patient exhibited here last winter. I have known the disease in such cases as this last to be viewed as an ill-defined flat abscess or carbuncle, and

treated accordingly till the error in diagnosis became self-evident.

The usual sites of trichophytosis barbæ are the chin, under the chin and jaws, the adjacent hairy neck, and the bearded sides of the face; the extent involved, as you have seen, varying considerably in different cases. The upper lip is rarely invaded, even when the disease is quite extensive; in this respect the patient before you is exceptional. Ordinary ringworm patches may coexist on other parts; for instance, as you see, this patient has a typical ringworm patch on the back of one hand; and I may add also that his wife has in the past week developed a patch on the cheek. The several varieties shown in these photographs represent the disease as commonly met with. Almost all the cases are mild and superficial at first; some remain so throughout, others advance slowly, others rapidly, into the true classic, deep-seated, or nodular form. Exceptionally, instead of beginning as one or more simple ringworm patches, ill-defined small areas of superficial or deep postulation or follicular inflammation first appear, resembling folliculitis barbæ (sycosis vulgaris). Rarely it may begin as a few closely but irregularly grouped papulo-pustules or pustules.

The disease, as you know, is contagious, the trichophyton fungus being the infecting and contagious element. It is not uncommonly contracted in barbers' shops; hence the term "barber's itch." In the large proportion of cases the patient will state that the disease first appeared a few days after being shaved in a strange shop. In other instances it is contracted from a child or children of the family who may have ringworm of the scalp or upon non-hairy parts; ringworm of the scalp, as our clinic shows, is not at all uncommon. In other cases it is contracted from the lower animals.

As a general rule, there should be but little difficulty in recognizing the disease. In the superficial form the ring-like character is usually diagnostic. This type should not, however, be confounded with the circinate and serpiginous syphiloderm; the latter is slow in progress, the border more infiltrated and prominent, often showing ulceration, and the central or cleared-up part usually atrophic or scarred. In the deep-seated cases the peculiar lumpy or nodular infiltrated areas can scarcely be confused with any other disease. A single nodular tuberculo-pustular area resembling a carbuncle or flat abscess, already referred to, occurring on these parts should always be viewed with suspicion, and theprobability of its being due to the ringworm fungus carefully considered. The history, the falling out of the hair, etc., are also important factors, and not infrequently a characteristic simple ringworm patch will be found to coexist upon non-hairy parts. In doubtful cases microscopic examinations of several hairs from the invaded areas should be resorted to. Simple sycosis (sycosis, sycosis vulgaris, coccogenic sycosis, folliculitis barbæ), with which ringworm sycosis is apt to be confounded, does not present itself in rings, is slower and more insidious in its progress, is usually diffused and superficial and less patchy; the upper lip is frequently involved, either alone or in conjunction with the disease on other bearded parts.

Fortunately, the disease, although often presenting active and repulsive symptoms, is usually rapidly amenable to treatment. All cases are curable, and only in the worst type and in long-neglected cases is there any conspicious permanent hair loss or other disfigurement. A period of several weeks or several months is required to bring about a cure. After apparent cure a relapse should be guarded against by occasional remedial applications for a few weeks or a month subsequently. The affection being a distinctly local one, constitutional remedies are, as a rule, not prescribed; but in those cases in which the pus-formation is a conspicious element, cod-liver oil, the hypophosphites, or similar nutrient tonics seem to have a favorable influence. An essential part of the treatment should be depilation,—extraction of the hairs from the diseased areas,—especially in the deeper seated types. I am convinced that this procedure will shorten the period of treatment fully one-third and possibly one-half. On unaffected parts the beard should for obvious reasons be kept closely cut. Almost any of the so-called parasiticides will be found efficient, such as ointments of sulphur, of carbolic acid, of white precipitate, or citrine ointment, lotions of sulphur compound, of mercurials, of carbolic acid, etc. The treatment here has gravitated to two plans, as being the most promising of rapid results,—one a sulphur treatment and the other a mercurial. Both are doubtless equally efficacious, but in some instances when process is slow or unsatisfactory from one plan a change to the other is found to be of advantage. In the sulphur treatment a lotion of sodium hyposulphite, one drachm to the ounce, and an ointment of precipitated sulphur of from ten to twenty per cent. strength, are conjointly prescribed. The mercurial plan consists in the use of a corrosive sublimate lotion, from half a grain to two grains to the ounce, together with the employment of an ointment of ten per cent. oleate of mercury, two or three drachms to the ounce of simple cerate, or simple cerate and lard, or, in place of the latter, a white precipitate or calomel ointment from thirty to sixty grains to the ounce. The plan being selected, the method of carrying it out is as follows: The lotion is applied freely, being thoroughly dabbed over the affected areas and somewhat less liberally over the whole bearded region,—over the latter in order to prevent the

FIG. 1.—Barber's itch, superficial type.

FIG. 2.—Barber's itch, medium type.

IG. 3.—Barber's itch, classic nodular type.

FIG. 4.—Barber's itch, circumscribed nodular patch.

nfection of new areas; after the wash has dried, the ointment is to be well rubbed in, usually over the diseased places only, but, if there is a decided disposition towards spreading, the ointment as well as the lotion should be applied, once daily at least, to the entire bearded part of the face and neck. The applications should be made morning and evening, and in urgent cases three or four times daily. Before each reapplication the parts should be washed off with warm or hot water, with the use of soap when necessary. Treatment should be continued vigorously till all vestiges of the disease have disappeared, and then, as already stated, intermittently or less actively for several weeks. By this subsequent intermittent or less active treatment the possibility of relapse is reduced to a minimum.—*Inter. Med. Mag.*

ARTIFICIAL SERUM.

M. Lejars has published an interesting article which merits the attention of practitioners. He relates a case of diffused peritonitis from rupture of the intestine, followed by a flow of stercoral and purulent matter into the cavity. The condition of the patient was despaired of by the surgeons in attendance, in spite of laparotomy, which had been performed as soon after the accident as it was possible. As a last resource, and for conscience sake, a pint of artificial serum was injected into the subcutaneous tissue. The following day the patient was somewhat worse, the pulse was frequent (130) and irregular, the temperature below the normal, and black vomiting set in towards evening. The subcutaneous injections were renewed morning and evening. Twenty-four hours afterwards, the temperature rose to 102°, while the urine was rare. M. Lejars, at this stage, injected two pints of the serum into the vein of the arm. The pulse became a little stronger, and the patient expressed himself as feeling better. Two other intravenous injections were made that same day, and continued at the rate of three daily for four subsequent days. The general condition constantly improved under this treatment. After an interruption of two or three days the patient became less satisfactory, but on the ninth day, they were suppressed altogether. Consequently, in the lapse of nine days, the patient received *forty-five pints* of artificial serum! The patient was saved in spite of an accident which might have seriously complicated the situation. On the tenth day, through an effort at coughing, the line of sutures burst, and the mass of intestines bulged forward through the wound, covered only by the peritoneum.

Two other cases were related by M. Lejars witnessing in favor of intravenous injections of artificial serum, and from which he drew the following conclusions:—Intravenous injection of aseptic serum at blood temperature and in massive doses (two pints three times daily) are inoffensive; these injections are capable of bringing about most unhoped for cures in certain affections, especially those connetted with the peritoneum; the injections seem to act by provoking large evacuations of the toxines of the blood, through the kidneys.

The author terminates his article by giving a description of the *modus faciendi*. "Our method of operating is very simple. We use a glass recipient properly sterilised, and a glass cannula with a fine point; the vein is dissected through a small incision, tied and opened with every antiseptic precaution above the ligature, and the cannula introduced, care being taken not to let in a bubble of air. By raising the recipient the liquid enters by its own weight; a certain thrill felt by the finger indicates that the solution is penetrating. At the end of the operation the vein is tied above the wound and the skin brought together by two sutures. At the second injection a segment immediately superior of the same vein is opened or one of the neighboring veins. In proceeding thus by segments from below upwards from the bend of the elbow to the shoulder, on the superficial veins, quite a series of injections can be made, clots being entirely exceptional. In the case above related in detail more than twenty injections had been made in one arm.

"It might be possible to pierce the vessel directly with the point of the canula, if it were standing out in bold relief, but it must be remembered that the cases where these injections are useful the veins are frequently flaccid. Out of fifty intravenous injections we never observed the slightest accident, nor have we remarked that the operation was painful. Sometimes, however, we observed a little dyspnœa at the end of the injection. The patients feel the liquid penetrating, they experience, at first, an irritation of the tongue and mouth, then a difficulty in breathing and finally a sharp abdominal pain of short duration, all these sensations proving that the liquid was being rapidly diffused. As to the liquid, the useful formula of Prof. Hayem is—

℞—Chloride of sodium (pure), . . . ʒj
Sulphate of soda, ... ʒij
Distilled water, ... 1¾ pints.

"The question of intravenous injections as applied to certain diseases is still on its trial, but in my opinion we have here a therapeutic method of considerable value in the great struggle with death."—Paris Correspondent *Med. Press.*

GELSEMIUM is the most potent drug known for the relief of cold in the head. If taken early, drop doses of the fluid extract administered hourly usually secure most satisfactory results.

INTUBATION IN DIPHTHERIA.—Bokai (*Deut. Med. Woch.*) discusses the question of how long the tube must remain *in situ*, his observation being based on 763 cases of intubation. Of the 763 cases, 268 recovered. Ninety cases, with 45 recoveries, have occurred since the introduction of the serum treatment. Out of the 673 before the serum treatment, 223 recovered, and only in 8 cases was secondary tracheotomy necessary. The duration of intubation was from a quarter of an hour up to 240 hours, except in seven cases, where it exceeded 10 days. In 62.77 per cent. the tube was in under 72 hours, and in 82.33 per cent. under 120 hours. The author gives details of cases in which the duration was under 24 hours, and also of two cases in which it was 349 and 360 hours respectively, the latter being the longest time. The mean average duration was 79 hours in 215 cases. It is the author's custom to withdraw the tube after 48 hours; in the 27 cases in which the tube was out before this time, it was due to the child expectorating it or pulling it out by the string, and to further introduction being unnecessary. In the 45 intubated cases of recovery under the serum treatment a secondary tracheotomy was only once necessary. The minimum duration of intubation was 2 hours, the maximum 168 hours. In 77.26 of these cases the tube was left out within 72 hours. The author gives his tables which show that under the serum treatment the number of cases in which the tube can be left out within the first and second 24 hours is greatly increased. He compares these figures with those obtained from observations on withdrawing the cannula in tracheotomy, where the results are very different. Although the tube remained over five days in 16.2 per cent. of the author's intubated cases, yet there was no case of severe decubitus (erosion) in the larynx. Thus secondary tracheotomy can be avoided. If the above numbers are added to those of Bleyer and Baer, it is found that out of a grand total of 479 intubated cases the tube remained in no longer than 5 days in 19. per 2 cent. The author then discusses the relation of this length of time to the question of decubitus. Finally he draws the following conclusions: (1) That the time for withdrawing the tube varies within very wide limits; (2) that the average time was 79 hours before and 61 hours after the introduction of the serum treatment; and (3) that he can not share the opinion of some writers who maintain that a secondary tracheotomy must be done if the tube can not be left off within five days. No definite fixed time can be laid down. The unquestioned presence of severe decubitus in the larnyx is an undoubted indication for a secondary tracheotomy, but the mere fear of such arising should not be taken as an indication.—*Brit. Med. Jour.*

MUSSER (*Univ. Med. Mag.*), in reporting a protracted case of typhoid fever, says: Anyone who is familiar with a protracted case of typhoid fever will readily appreciate at what wit's end one is often placed to meet the varying indications that are constantly arising. So many matters of therapeutic interest, and management arose in this case of decided interest that I venture to present a few of them, at least, for your considering. First, *diet* and *stimulants*. Milk was given for a time in the quantities usually advised, but it was soon found that the amount had to be considerably reduced. Even then it was rejected and cream substituted. Animal broths were refused by the patient. When the vomiting became pronounced the patient was fed by enema. The occurrence of the hæmorrhages forbade at one time feeding by this means. The one stimulant especially relied upon, and which seemed to be the most beneficial, persistently used, was *coffee*. This was given during the height of the disease to the period of defervescence. At first two tablespoonfuls could be taken, hot and without cream or sugar, every two, three, or four hours. Later it was given in larger amounts at longer intervals. Both champagne and whisky were used at different periods. During the time of the greatest gastric disturbance the champagne was the most acceptable. It was administered in the usual manner. I particularly wish to refer to the use of coffee, and urge the more constant use than we are accustomed to give it in acute diseases. I am quite sure that it contributed to the saving of the life of this patient, and it appeared to have a good effect in preventing vomiting.—*N. Y. Polyclinic.*

ON THE LINE OF ACTION TO BE ADOPTED IN THE CASE OF A WOMAN WHO IS ABOUT TO DIE WHILE YET UNDELIVERED.—Remy (*Journal de Médicine de Paris*) advises under such circumstances as these that an effort be made to save the life of the child, and as a means of accomplishing this three plans have been suggested. They are: (1) to wait for the mother's death and then immediately to extract the child; (2) to do Cæsarean section while the mother is yet alive; (3) to employ means to expedite labor and to extract the child by the natural passages as speedily as possible.

Remy then proceeds to discuss the relative advantages of these different modes of action. Prunshuber's statistics show that when the mother is allowed to die before the child is extracted by abdominal section only about 5 per cent. of the children survive. Puech's statistics are somewhat more favorable; but there can be no doubt that the chance of obtaining a living child under these circumstances is very small. The performance of Cæsarean section upon a dying women who is unable to give her consent to the operation is undoubtedly open to sentimental objections. Gus-

serow and Manasse consider that the operation is justifiable under the following conditions: (1) when it is clearly proved that the mother is about to die, and (2) that the child is alive. Remy favors the plan of rapid dilatation of the cervical canal and extraction of the child per vaginam. Violent measures should be avoided, and the dilatation should be proceeded with as slowly as the condition of the mother will permit. The cervix may be dilated by means of Champetier de Ribes' bag or by the hand alone. If traction is made upon the bag, dilatation may be produced in less than half an hour.—*Practitioner.*

How to Allay the Pains of Burns.—The immediate relief of the pain of burns and scalds is a matter of much practical importance to the surgeon as well as to his patients. Constitutional shock is thereby lessened and one of the initial dangers of injuries of that class is avoided. The subject is one of widespread interest, and it is not altogether surprising to find the lay newspapers giving prominence to a means of stopping the pain of burns said to have been lately introduced with great success by a surgeon of the Charité Hospital in Paris. The remedy, with which many readers are already doubtless familiar, is a solution of picric acid. That it is an altogether harmless application, as claimed by the Parisian surgeon, is a statement open to some question. Picric acid is toxic to man, as to the lower animals, and when given internally causes gastric disturbance, rapid wasting, and universal staining of tissues, without elevation of temperature. If, then, a solution of the acid were applied to a raw surface resulting from a burn or scald, absorption of a dangerous amount might readily take place. As every one knows, the pain of such injuries may be readily controlled by other means. Perhaps the best known is a solution of bicarbonate of soda, a teaspoonful to the pint of water, which often acts like a charm. A weak solution of carbolic acid has an almost instantaneous action in controlling the terrible pain resulting from such wounds, and a similar observation is true of various other antiseptics, among them preparations of sanitas fluid and oil. There could hardly be any more practical application of science than the relief of a distressing symptom of this kind by the modern surgeon.—*Med. Press.*

A Clinical Study of Antikamnia.—The *New York Medical Record* contains an exhaustive article under the above caption by Samuel Wolfe, A. M., M. D., Physician to the Philadelphia Hospital; Neurologist to the Samaritan Hospital, Philadelphia. He summarizes as follows: "I feel justified from my experience, to formulate the following conclusions: That antikamnia is valuable for reducing temperature in febrile complaints. That it is of service in many forms of pain connected with febrile diseases. That it has a field of use in rheumatic and gouty affections. That in neuralgic and myalgic pains, it is not only palliative, but along with other measures, assists in ultimate cures. That in neurasthenia, hysteria and migraine, it is a valuable adjuvant to the other recognized therapeutic measures. That in organic nervous diseases, it has a field of application. That it is the least depressing of all the drugs that can exercise so extensive a control of pain, and also least disturbing to the digestive and other organic functions." He further states:

"The scientific physician prefers always to treat a cause or condition, rather than a mere symptom. If he can remove pain, by abolishing its cause, he will do so, rather than to blunt the sensory structures so that the pain is not felt. The demand for relief from mere symptoms, however, frequently becomes imperative, and this is especially the case when pain is present. We could cease to respect the physician, who in the presence of an acute agonizing pain, which mechanical or other means could not quickly relieve, who would withhold the hypodermic morphia. On the other hand, we applaud the sentiment which seeks for measures to combat this symptom, carrying with them less of the remote dangers, which are inherent in the frequently repeated and long continued use of opiates."

Fœtal Hiccough.—Singultus has been observed in the child in utero for many years. The author has recently seen two cases. He thinks that no pathological significance can be attached to the phenomenon. It has been observed as early as the seventh month and up to and during labor. Active movements on the part of the mother may cause an attack, and likewise prolonged and rough palpation; but the attacks may also occur during the woman's sleep.

Hink observed an attack of hiccough in a deeply asphyxiated child, unattended by the usual sound, and after removing some mucus from trachea the child had another attack, attended by the usual characteristic noise. He concludes from this case that there is a kind of singultus without the passage of air through the glottis, and that, therefore, this phenomenon can occur in utero. This movement can be distinguished from others by its position over the back and shoulders of the child; by its frequency, about every four seconds, which excludes fœtal or maternal pulse; and by the suddenness of the motion, its jerky character, and short sound, which distinguish it from partial contraction of the uterine or abdominal muscle.—*Chicago Medical Recorder.*

MIXED INFECTION IN PHTHISIS.—Spengler has endeavored, in fifty cases, by means of bacteriological examination of the sputum and carefully conducted autopsies, both from the bacteriological and anatomical stand-point, as well as by a careful comparison of their clinical histories, to get some explanation of the different types in which phthisis manifests itself. As a result he arrives at the following conclusions: 1. In tubercular phthisis only a small percentage of the cases are uncomplicated cases of tuberculosis of the lungs. If fever is present in these pure cases, the extent of the mischief is much greater than the physical examination would lead one to suppose, and the prognosis is unfavorable. They become still more unfavorable in case a mixed infection is added. These cases are adapted to the tuberculin treatment. 2. Most cases of phthisis are complicated by a mixed infection with streptococci, and may be classified as active or passive, according as fever is present or not. The prognosis of the active form is good if it complicates a local tuberculosis, remains circumscribed, and receives prompt climatic treatment. Other bacteria, as well as the streptococcus, may complicate tuberculosis, such as Fränkel's diplococci, staphylococci, tetrageni, influenza and pseudo-influenza bacilli, and others. If secondary bacteria appear in a few colonies only in several sputum examinations, fever, if it be present, is not due to the mixed infection but to the tuberculosis, or to some focus of infection other than the lungs. If fever is absent and yet streptococci are found in considerable abundance, the sputum should be carefully washed in order to rid it of accidental impurities from the upper air-passages; and then, if they still persist, the presence of bronchiectasis or cavities may be inferred. —*Clin. Med. Rec.*

In response to the toast *The Medical Press*, at the Missouri Valley Medical Society, one of our fellow laborers in the vineyard has this to say of the medical journal.

"The editors of medical journals, do not boast of moulding medical opinion; aspiring only to be the avenue of the profession to the medical public —an exponent, not a dictator; an arena upon which physicians and surgeons and specialists may meet and exchange their views in any department of the science.

It is said that pharmacy is the handmaiden of the medical profession.

If so, then the medical journal is the bicycle, I should say the vehicle, in which she rides.—*Bul. Am. Med. Assoc.*

THE UTERUS IN ECTOPIC GESTATION.—Pilliet (Ann. de Gynec. et. d'Obstet.), has studied the histology of the modifications which the uterus undergoes in tubal gestation. He finds that the development of a decidua in its empty cavity during ectopic pregnancy is more than a pathological phenomenon; it is a distinct clinical complication. As long as the decidua remains in place the uterus is practically in a condition of subinvolution; hence both hæmorrhages and membranous dysmenorrhœa may occur. When the decidua has been shed there is danger of diffusion of metritis to the whole uterine muscle. Pilliet adds rather significantly that the etiology and pathology of endometritis are both obscure, and that probably ectopic gestation, overlooked in the early stages, may account for many peculiarities in cases of endometritis hitherto hard to explain.—*Times and Reg.*

THE WISDOM TEETH AND THE TONSILS.—In the *Mercredi Médical* for November 15th there is a paper which was read before the Bordeaux Society of Medicine and Surgery by Dr. Dunogier, who related a case of relapsing amygdalitis caused by the eruption of the lower wisdom teeth and a case of chronic amygdalitis kept up by difficulty in the eruption of a wisdom tooth. The treatment of such cases, the author remarks, is of two sorts—preventive and curative. In regard to the practice of extracting the first molar tooth at about the eleventh year of age, he confesses that he does not share the apprehensions that have led some of his *confrères* to advocate that procedure, and he adds that he has never seen the regularity of the dental arch interfered with by allowing the tooth to remain. Moreover, he does not consider that complications due to the appearance of the wisdom teeth occur often enough to call for the extraction of the first molars as a preventive. Curative treatment, of course, consists in doing away with the cause, meaning not necessarily the tooth, unless it deivates, but the gum.

Paul Bergengrün (*Archiv f. Laryngol. und Rhinol.*, Bd. ii, Heft 2) relates the histories of seven cases of laryngeal tuberculosis which healed without surgical treatment. He used locally lactic acid and iodoform. One patient was curetted and the lesions healed not only where the parts of the larynx were curetted, but also where they were not. In one case he used tuberculin, which caused intense local reaction, but resulted favorably in the end.

EXTIRPATION OF TUMORS OF THE BREAST.—F. H. Wiggin endorses the modern operation of complete extirpation in cancer of the breast (including pectoral muscles as well as axillary glands and intervening tissue), and emphasizes the necessity of early removal. Rapid cicatrization of the wound is secondary in importance to thorough removal of adjacent tissues.—*Lancet.*

OBSTETRICS AND GYNÆCOLOGY

IN CHARGE OF

J. ALGERNON TEMPLE, M.D., C.M., M.R.C.S., Eng.,

Professor of Obstetrics and Gynæcology, Trinity Medical College;
Gynæcologist Toronto General Hospital; Physician to the Burnside Lying-in Hospital.
205 Simcoe Street.

ON THE INDICATIONS FOR EXAMINATION AND TREATMENT OF CERTAIN CONDITIONS IMMEDIATELY FOLLOWING CHILDBIRTH.*

This subject would open up a wide field for study, were the attempt made to treat it exhaustively. My aim is to bring forward some practical points of daily occurrence which are important in consequence of their frequency, and because a too common neglect to receive prompt attention often leads to serious results. If a woman during her early puerperium be seized with a rigor followed by high fever and all the indications of septic poisoning, or by a free hæmorrhage, the indications for immediate and radical interference are forcibly brought to the medical attendant. But under less urgent conditions a more conservative course is too often pursued.

Minor disturbances, such as severe "afterpains" accompanied by free uterine flow and the escape of clots, a large, sensitive uterus, slight elevations of temperature, fœtid lochia with or without such febrile reaction, sensations of pelvic weight and distress, loss of appetite, and mental depression, represent the clinical picture in the class of cases to which I desire to direct your attention. In some cases the departure from a normal convalescence is so slight that the term "a slow getting-up" may apply, and it is in such that I make the plea to have the condition of the uterus investigated.

In no class of cases is the temperature range such a sure index of the condition of the patient as during the puerperium. No matter how well the patient expresses herself, if the temperature range is only one degree above the normal curve the attendant should not rest satisfied until he has explored the condition of the uterus and ascertained the cause. It is bad policy to neglect even these slight excursions of temperature, trusting to Nature to correct the difficulty, or to attribute the symptoms to some condition existing outside of the birth canal. The only safe course is to consider that the cause of all these deviations from a normal convalescence exists in the reproductive organs, and to look elsewhere only after a careful examination has demonstrated it otherwise. It is a matter of astonishment that at times the examination finds so little to account for the tardy convalescence, and yet the correction of that little changes the entire aspect of the case. On the other hand, the reverse holds good, and we find local changes of a severe type accompanied by very little constitutional disturbance.

To illustrate these points I will briefly refer to experiences which are fresh in my mind.

On March 1st, 1894, I was called in consultation to see a primipara who had been delivered about three weeks before. Her temperature had been raging between 99° and 100°, tongue coated, bowels sluggish, no appetite, spirits depressed. After the tenth day she had sat up a little each day for a week, but after that felt no disposition to leave her bed. She had complained of tenderness over the right iliac space, for which a blister had been applied. Examination of the pelvic organs showing nothing abnormal, I suggested irrigating the uterine cavity. This was done with a warm two per cent. carbolic acid solution, and a little shreddy tissue escaped in the return current. The temperature became normal, and after three more irrigations the patient was fairly convalescent. In this case a mild endometritis was the cause of retarded recovery.

In another case I was consulted by a brother-practioner about his wife, who had given birth to her first child four weeks before. For the first ten days there was no trouble, except a daily evening rise of temperature to 99.2°. After the ninth day carbolized vaginal douches had been given. On the twelfth day the temperature went up to 102°. An intrauterine douche was administered, and for the next four days the temperature was normal in the mornings but slightly elevated in the evenings. On the seventeenth day the temperature reached 101.2°, and the intrauterine douche was repeated with the same result. On the twenty-sixth day the temperature again went up to 101.2°, and I was asked to see the case, as

*President's address, delivered before the Washington Obstetrical and Gynecological Society 1895.

they were discouraged and anxious because of the persistent recurrence of these febrile attacks.

Examination revealed a large, retroflexed uterus. The malposition of the organ interfered with drainage, and the accumulated lochial discharge decomposed and produced the fever. The irrigation would cleanse it for a time, but, the condition being reproduced after a short interval, the fever would recur. The organ was replaced and held, at first with tampons saturated in a glycerine solution of boroglyceride, and afterward with a pessary. There were no further disturbances and the patient was soon out of bed. Later the pessary was discarded entirely and the organ remained in proper position. This patient had recently given birth to a second child and had a perfectly normal labor and convalescence, the uterus maintaining its proper position.

To emphasize the opposite state of affairs—viz., a severe type of local changes with little constitutional disturbance—I will briefly refer to a case that came under my observation during the past summer. The patient, a primipara, was placed in my charge by her family physician, Dr. D. W. Prentiss, at about the eight month of pregnancy. From him I learned that she had been of delicate health during girlhood, and about three years before she had suffered severely from Basedow's disease. Prominence of the eyeballs and accelerated heart's action were still apparent. She was placed upon strophanthus, and on July 16th I was sent for to attend her in labor. The confinement was normal in every respect. Although she got along nicely during the succeeding days and said she felt perfectly well, her evening temperature ranged about one degree too high. The lochia were normal for the first days, but later had some fœtid odor. Antiseptic vaginal douches having been employed without any improvement of the odor, I determined on the seventh day to irrigate the uterus, although the temperature had never been above 100.2° and she expressed herself as feeling very well. The introduction of the irrigating tube was followed by the same result as if a trocar and canula had been thrust into an abscess: at least four ounces of thick, yellow pus escaped. After two or three irrigations the temperature came down to normal, and from the first one there was a rapid reduction in the amount of pus. The interest in this case was the absence of constitutional symptoms, except the very slight elevation of temperature, in spite of the presence of pus and the activity of the uterine absorbents.

Next to the thermometer the most valuable index of minor departures from the normal state is the condition of the lochia. They may be too free; may contain clots or shreds of tissue; the sanguinolent character may persist too long, or it may disappear to recur without cause or upon assuming the upright position. They may be purulent, or they may present an odor, more or less marked, of putrefaction.

Any one or combination of these changes should demand attention, whether accompanied or not by constitutional disturbance. The cause is easily corrected, as a rule, and immediate danger or remote invalidism prevented.

Investigation of the uterus will generally bring to light some or other of the following faulty conditions:

1. The uterine tumor is larger than it should be and is slightly sensitive. Retraction has been deficient, and there has been oozing into the cavity and some blood clots retained.
2. Retention of some fragments of placental tissue or shreds of membrane.
3. The action of the bacteria of putrefaction on these tissues, and the development of ptomaines with or without absorptive fever.
4. Necrotic endometritis, localized or diffiused, simple or purulent.
5. Displacements of the uterus.

Before taking up the treatment of these conditions, reference will be made to certain precautionary measures that should be employed in every case of labor.

Obviously it should be sought to secure:

1. Firm contraction and retraction of the uterus.
2. A perfectly empty and aseptic uterus.
3. A uterus in good position to secure free drainage.

Firm retraction of the uterus is essential to the guarantee of a satisfactory convalescence. It is Nature's ligature for controling hæmorrhage from the open sinuses after placental separation. The hæmorrhage may vary in degree from an oozing to the most frightful escape of blood that one can have the misfortune to witness. Out of respect to my audience I refrain from giving the physiology and rules of conduct of the third stage of labor, but I ask to mention a few simple errors in this connection which are frequently responsible for failure. These are premature efforts to extract the placenta, insufficient rubbing and massage of the uterine tumor, injudicious traction on the funis, failure to follow down the uterus and to continue the rubbing and massage after expulsion of the afterbirth, and finally moving, raising, and changing the position of the patient while cleansing and fixing her in bed. If the woman has been delivered on her side the position should be changed for the dorsal before extracting the placenta. These may seem unimportant steps, but their neglect is often responsible for oozing and retention of clots *in utero*.

To secure firm retraction of the uterus in cases of hæmorrhage of miner degree, the best agents are massage and rubbing the uterus, the introduction of the aseptic finger and removal of clots, and the intrauterine irrigation of a hot antiseptic

solution If these fail to promptly arrest the flow I have never been forced to apply but one other means, and that is the introduction *in utero* of iodoform gauze. This is removed the next day and the uterus washed out.

Next to firm retraction of the organ was mentioned the importance of a perfectly empty and aseptic uterus. The same measures employed to obtain firm retraction secure an empty uterus, and the evils mentioned in connection with the former apply equally well in the latter. Premature efforts to extract the placenta and injudicious traction on the cord are responsible for many failures to secure an empty uterus. In delivering the placenta by expression care must be taken that its exit from the vagina is not too rapid. It should be caught in the hand, held a moment, and the membrane twisted into a rope. Practitioners have been severely criticised because small pieces of placental tissue have been retained without their knowledge, and in one case I know of the accident was made the means of injuring the reputation of a careful physician. Not infrequently the afterbirth is delivered in a perfectly normal manner, it is apparently intact, and yet subsequent turn of events demonstrates that a small piece had been left attached to the uterine wall.

Several explanations may be offered to account for these failures. The existence of a placenta succenturiata is one. Cotyledons may become detached from the organ and remain adherent while the fully formed placenta is expelled. A very recent experience of this kind accentuates its importance. I had delivered a primipara after an easy labor and extracted the placenta and membranes naturally. The next morning her temperature was 99⅕° and she was doing well, except that the uterine tumor was too large and sensative and she complained of more or less constant pain in the organ. Compression reduced the size of the mass and expelled some dark clots. That they were not the source of trouble was shown by slight chilly sensations and rise of temperature to 101° during the evening of the same day. The uterus was still tender and large. The placental forceps was introduced within the uterus and a circular piece of placental tissue about one and a half inches in diameter was extracted. The douche curette was used but nothing more found. Prompt relief of the symptoms followed.

Another explanation for the retention of placental fragments is that the line of separation between placenta and uterus may not always follow that intended by Nature. This line is not the junction of fœtal and maternal tissues, but it is within the cells of the decidua serotina, so that, when physiologically terminated, the expulsion of the placenta carries with it a layer of maternal tissue. Slight adhesive spots may deflect the line of separation and encroach upon placental tissue, leaving more or less of the tufts of villi attached to the maternal structure. These adhesions may be the result of inflammatory action or simply a failure of those changes to occur, changes attributed to fatty degeneration, which mark the weakest spot and prepare the organ to separate and fall off like a ripened fruit. Exaggerated conditions of this kind are met with in the so-called adherent placenta, where great difficulty is sometimes met with to separate the attachment of the organ. In these cases the greatest care is necessary to remove all placental tissue. According to my observation abnormal adhesions of the placenta have been commonly associated with prolonged gestation. If there be any reason to suppose that the afterbirth is torn or any portion left attached, the finger should be introduced and the uterine cavity explored. In uncomplicated cases of placental delivery the indications for such examination would be a too free discharge of blood occurring in spite of the existence of a firmly retracted uterus and in the absence of lacerations of the birth canal.

In addition to an empty uterus it is important to have it aseptic. This point is passed by, as the importance of the subject and the methods of obtaining it are familiar to every one.

3. The uterus should be in position to secure drainage of the lochia. The deviations from normal are usually backward. The organ is enlarged, softened, and heavy, the ligaments lax and lengthened. After the fifth day of the puerperium involution reduces the size of the organ sufficiently to permit the fundus to fall under the sacral promotory. Retroversion is changed into retroflexion, and occlusion results at the angle of flexion. More rarely the heavy uterus bends forward and anteflexion produces the same condition. Retention of the lochia leads to their decomposition, endometritis, absorption of the products of putrefaction and fever. A uterus displaced before pregnancy is very apt to have the abnormal position reproduced afterward, and prudence would suggest in these cases the use of a pessary after the fourth day of the puerperium.

Primary displacements are favored by continual back position and the pernicious use of the compress. This contrivance, in the first place, is unnecessary, and, in the second, is often applied in such a faulty manner that it only serves to push the uterus backward. It is unnecessary, because a woman should not be bandaged until the uterus is firmly retracted and there is no danger of subsequent relaxation. The application is often faulty, because instead of being placed so that the tightened bandage forces the compress down above and behind the fundus, it is put over the anterior surface of the uterus and pushes the organ backward. Only the large size of the uterus soon after confinement prevents backward displacement resulting from this cause.

Primary displacements, if treated with a pessary, are nearly always cured in a few months.

Secondary or reproduced displacements are not permanently benefited. I have repeatedly attempted to take advantage of the process of involution to cure pre-existing displacements, but connot recall a single success.

The symptoms and treatment of the complications mentioned next demand our attention.

1. Deficient retraction, oozing, and retention of clots *in utero*.

This is more likely to occur in multiparæ, and especially after rapid labors. The uterine tumor is larger than normal and sensitive. Severe afterpains are common. The thermometer indicates a slight elevation of temperature, but it rarely exceeds 100° in the evening unless putrefactive changes occur. The lochia are too free or continue too long and clots may escape. Putrefactive changes in the clots impart a disagreeable odor to the flow.

This is a simple condition, but is one too often left for Nature to correct. All the treatment necessary in the majority of cases is to give a vaginal douche, temperature 115° to 125°, and at the same time to empty the uterus by compression. The relaxed condition of the abdominal walls at such a time permits the physician to grasp the organ with both hands and to express the clots by Credé's method of placental delivery. This manipulation should be done by the physician himself and not left to the nurse. A purgative given on the second or third day, and the patient assuming a sitting posture during defecation, often expels clots from the uterus.

If these simple measures fail, the uterine cavity should be explored and cleaned out with the finger, placental forceps, or douche curette.

2. The retention of some fragments of placental tissue or shreds of membrane is a common complication. Unless the amount of foreign matter retained is not unusually great, the symptoms differ from the preceding in that the uterus is not enlarged nor sensitive. Afterpains are not prominent, and the condition is met with as often in primiparæ as in multiparæ. The one symptom common to both is excessive discharge of blood in the lochia. It occurs in this case in spite of firm retraction of the uterus and in the absence of lacerations of the birth canal. The complication may be manifested not so much by free discharge as by the persistence of the bloody lochia or by their repeated recurrence. These recurrences may appear while the patient remains in bed, but often do so on changing the position, or may be delayed until getting out of bed.

The early detachment and escape of the retained tissue is the most favorable termination. Sometimes the adherent placental tufts do not manifest their presence until late in the puerperium. I recall the case of a primipara, delivered October 2nd, 1894, who passed through her lying-in period satisfactorily, and on November 5th, which was five weeks afterward, was taken with a hæmorrhage while out walking. The next day a profuse and alarming discharge of blood occurred before getting out of bed. With the dull douche curette a quantity of placental tissue was removed and no further trouble occurred.

The treatment of this complication is the removal of the foreign substance as soon as we suspect its presence. If bleeding such as described occurs after the third stage of labor, the finger should be passed into the uterus, the cavity explored and completely emptied. The conditions all favor this line of action. The uterus is easily depressed, the vagina is capacious, and the cervix dilated so that the finger is readily passed. When interference is called for later the placental forceps and douche curette must take the place of the finger, unless the cervix be dilated under anæsthesia. The placental forceps is objected to as a dangerous instrument. It is dangerous only when carelessly used, and the same objection will apply to any instrument. It is not in every way a satisfactory instrument, as some of the retained tissue may escape its search, and we have no means of knowing that the uterus is entirely emptied unless the finger can be inserted. The dull douche curette is more thorough, as we can go over the entire surface, scraping and loosening the attached pieces, while the current of the warm antiseptic solution washes them out. After this is done a piece of iodoform gauze is passed into the uterus for its hæmostatic effect, if such be indicated. It is removed the next day and the uterus washed out with a warm carbolic acid or creolin solution. Hot antiseptic douches, vaginal or intrauterine, meet all further demands for treatment.

The gauze is introduced, as stated, for its hæmostatic effect, and not for drainage. The professional ears of some may be shocked by the statement that I have discarded gauze for the purpose of drainage. At best it can only drain serous fluid; clots, débris, and pus are retained behind it.

If retained tissue does not become detached and expelled, or is not removed by the means mentioned, it is liable to be attacked by putrefactive bacteria. This process may hasten the separation and the putrid substance be discharged without further complication than producing a fœtid odor to the lochia. On the other hand, there is danger of its retention, followed by fever, necrotic endometritis, and finally serious inflammatory complications which are beyond the scope of this paper to consider.

The signs of putrefaction, fœtid lochia, and elevations of temperature, even slight, are strong

indications for prompt action to remove the foreign substance and cleanse the uterus. The finger, placental forceps, or dull douche curette will accomplish this end, and intrauterine irrigation must be employed to overcome the putrefactive changes and cure the necrotic endometritis.

The endometritis may be a mild localized inflammation surrounded by a protective zone, or it may be diffused and purulent. Even in the mildest cases there is some elevation of temperature and subinvolution of the uterus. As the local and general conditions improve, the amount of shreddy tissue washed away by irrigation gradually diminishes.

The final consideration remains—the treatment of displacements of the uterus.

This complication is not uncommon, and it is important that it should be recognized and corrected. The retention of lochia is followed by their decomposition and by endometritis. Only temporary relief is gained by the curette or irrigation. The discharge reaccumulates and symptoms recur. Fever from this cause does not appear until the end of the first week, or even later. The obstruction caused by the malposition must be overcome by replacing the organ in proper position. If a pessary cannot be used at once on account of sensitiveness, the organ should be held up at first with tampons of wool saturated in a glycerine solution of boroglyceride. Besides the case already reported a number of others have come under my observation in which obstinate fever was overcome only by restoration of the displaced uterus.

The following case was recently met with. A physician, careful and painstaking in all his work, on leaving the city for a vacation placed in my care a young primipara whom he had delivered ten days before. She seemed to do well after confinement, except that her temperature curve ran between 99° and 100° and clots were passed in the lochia. On July 24th, the eighth day after labor, her temperature went up to 101°. Her attendant gave an intrauterine douche, and the same evening a piece of placental tissue came away. She seemed better afterward, and when I first saw her, and for the succeeding four days, the temperature was slightly above 99°. On the afternoon of July 29th, the thirteenth day of puerperium, her temperature was 100.8° and she had a free bloody discharge. Examination showed the uterus enlarged and retroflexed. The douche curette brought away a considerable amount of placental tissue. The immediate effect of the manipulation was to cause a chill and send the temperature up to 104°. It fell rapidly, but for the next three or four days remained one or two degrees above normal in spite of intrauterine irrigation. The uterus was then placed in position and held by a pessary. Drainage being good, the temperature became normal and remained so without any further treatment.

In presenting these clinical cases and remarks for your consideration, I am aware of the rudimentary character of the teaching involved. If I have not made the importance of it sufficiently plain to justify my action, it is due to the imperfect manner in which I have presented the subject. I am convinced it is important not only by my own work but by cases I have seen in consultation. Certain it is that even the most painstaking and careful obstetrician will meet with these cases in his practice, and my wish is to urge prompt interference. I have no reason to regret my action in these cases, and feel that experience has taught me a valuable lesson in so doing.—Henry D. Fry, M.D., in *Am. Jour, of Obstet.*

Operative Interference in Periuterine Hematocele.—Reynier condemns the expectant plan of treatment and points to the statistics of Martin: 265 cases treatly expectantly, mortality 63 per cent; 585 treated by operation, mortality 24 per cent. The procrastinating method of expectant treatment is slow and exposes the patient to relapse, suppuration, and pelvic peritonitis. The most frequent case (90 per cent.) of periuterine hematocele is extrauterine pregnancy. Operative interference is advised for the following reasons: (1) to arrest the hæmmorage; (2) to remove from the peritoneal cavity the blood and products of pregnancy; (3) to remove the diseased adnexa and thus assure definite cure. If the hematocele is suppurating, vaginal laparatomy should be performed, while the abdominal incision is selected in recent, non-suppurating cases. The author supports his views by a report of twelve cases, laporatomy and recovery in every case.—*Am. Jour. Obs.*

Cholecystenterostomy by Means of the Murphy Button.—Two cases are reported by Baer which possess features of considerable interest. In the first gall bladder was easily connected with a knuckle of intestine below the duodenum; the button came away on the eighth day together with five hundred and twenty-seven stones; patient sat up on the sixteenth day. In the second case the patient was very fat and it was only after the greatest difficulty that the operation could be completed; it was impossible to bring up a coil of small intestine, and the gall bladder was finally attached to the *transverse colon*; recovery was slow. Now, two years after the operation, both patients are in perfect health.—*Am. Jour. Obs.*

NERVOUS DISEASES AND ELECTRO-THERAPEUTICS

IN CHARGE OF

CAMPBELL MEYERS, M.D., C.M., M.R.C.S. Eng., L.R.C.P. Lond.

Neurologist to St. Michael's Hospital. 192 Simcoe Street.

ENDOTHELIOMA OF THE FISSUE OF ROLANDO : EXTIRPATION : CURE.

BY M. O. KAPPELER.

It is an undeniable fact that in spite of the progress of cerebral physiology and of diagnostic topography, the cases of extirpation of cerebral tumors followed by cure are not frequent. The author has just published an observation of this kind which merits being reported not only on account of the success which followed the intervention, but also on account of the precision which M. O. Kappeler exhibited in the diagnostic topography of the cerebral lesion.

The patient was a blacksmith 43 years of age who, except for a blow on the head twenty years previously, had always enjoyed perfect health. The family history showed no tubercular or syphilitic affection. Two years ago this man began to experience a slight weakness in the right arm and leg without any other cerebral symptoms. The 15th of January, 1894, he had an attack with loss of consciousness and sharp pains in the right arm. This attack was followed by a pronounced weakness of the leg and arm of the same side. Ten days after the attack was repeated and accompanied by convulsive movements of the right hand.

The patient entered the hospital of Munsterlingen the 31st of January. He was a vigorous man, and his head showed neither cicatrices nor any especially painful points. The same evening he complained at times of slight headache without precise localization. The examination of the cranial nerves did not show any changes in them. The right leg and arm were decidedly weak. All the movements were performed but without force and slowly. The patient could only walk with the aid of a stick, and the right leg dragged heavily. The tendon reflexes were normal and equal on both sides. Except for some pains and a feeling of formication in the right arm, the sensibility was not altered. The attacks mentioned above were repeated very irregularly; sometimes they were frequently repeated during one day, sometimes they were separated by an interval of several weeks. These lasted from one to three minutes, and were always preceded by convulsive twitchings at first in the right arm, then in the right leg, then in the right side of the face. In the most severe attacks the convulsions extended to the left side of the face also. With each attack there was a more or less pronounced loss of consciousness. After the attacks the patient experienced headache and a certain difficulty in speech. In the beginning of April he left the hospital, but was obliged to return at the end of twenty days on account of the attacks becoming more severe and more frequent, as well as an increased weakness of the right side : the patient then desired surgical interference.

The existence of a typical Jacksonian epilepsy and the fact that the paralysis only implicated the arm and leg, but not the facial nerve nor the hypoglossus, determined the author to admit that the cause was a cerebral lesion. The absence of affection of the optic nerve, of tubercular or syphilitic history, together with the course of the disease, permitted the precise diagnosis of a tumor (glioma or sarcoma) of the upper end of the fissure of Rolando.

After having determined the Rolandic line after the method of Kocher, M. Kappeler proceeded to operate. He laid bare the duramater in the middle and upper part of the fissure of Rolando. This membrane was scarcely incised when a reddish-grey tumor was perceived, of a soft consistence and the size of a duck's egg, enclosed between the ascending frontal and ascending parietal convolutions situated consequently in the fissure of Rolando. The operator succeeded without the aid of any instrument in ennucleating

the tumor without difficulty, as it was encapsuled and fixed by a slender predicle to the piamater. The cavity itself in which the tumor was logged was entirely lined by this membrane. The hæmorrhage, which was not abundant, was chiefly venous. After having tamponned the cavity, M. Kappeler partially closed the wound. The pulse was very frequent during two days in spite of a nearly normal temperature which never exceeded 38.2°. The cerebral symptoms following the operation consisted at first in a slight degree of aphasia, then in convulsive twitchings in the right facial which appeared later in the left. On the following day these symptoms became less marked and the patient rapidly improved. A month after the operation he could walk without assistance, and on the fiftieth day he commenced to write with his right hand.

The patient quitted the hospital soon after. Seen again at the end of four months, he was quite well and had resumed his trade. The right hand was a little stronger than the left; he used it freely and wrote without difficulty. The right leg was also stronger. The epileptic attacks had completely disappeared since the day of operation.

The histological examination of the tumor showed an endothelioma, the starting point of which was in the coverings of the brain. According to the experiments of M. Hanan and the teaching furnished by medical literature, these tumors do not generally give rise to metastases, and do not invade the surrounding tissues. The prognosis of the case related by the author must consequently be considered as favorable, thanks to the brilliant operation which was performed.—Translated from *La Semaine Médicale* by CAMPBELL MEYERS, M.D.

TRAUMATIC NEUROSIS.—Strümpell (*Munch. med. Woch.*) says that in most cases the manifestations are really psychical. The term "traumatic neurosis" is open to some objections; it is not a disease in itself, but includes hypochondriacal, neurasthenic and hysterical manifestations, etc. The psychogenic origin of these cases is generally admitted. It is mostly easy to decide whether organic disease really exists or not. The general appearance of the patient, the facial expression, behaviour, actions, and subjective complaints are characteristic. If pain is complained of in a part, the lightest touch there may give rise to much complaint. It is not really the pressure but the imagination of some disease affecting the part which causes the sensation of pain. In investigating such conditions the patient's attention must be directed away from the part. The idea of physical disability is so marked that the required innervation is not forthcoming. By attention to small details in the examination, a sound conclusion can generally be arrived at. The author discusses the so called objective symptoms in the traumatic neuroses. He recommends that a too careful examination of sensation should not be made in cases where there has been no severe injury. The patient's power of work is not affected by disturbances in sensation which are the outcome of auto-suggestion. The estimation of the field of vision is of even less value than the disturbances in sensation. The examination is dependent on the accounts given by the patient, and the results are often variable. As far as work is concerned, the diminution in the field of vision has no significance. From the side of the heart or lungs the so-called objective symptoms carry little weight. Even the increase in the pulse-rate, due to pressure on a painful spot, has a psychical explanation. Thus all the so-called objective symptoms of the traumatic neuroses mst be accepted with reserve. At times the distinction between simulation and hysteria may be difficult. In the latter case there are diseased ideas which force themselves with much persistence into the patient's consciousness. General rules for the detection of simulation cannot be given. Besides the mental condition any objective evidence, as well as the constancy of the symptoms, must be taken into account, together with the previous condition of the patient. It is mostly only the strength of the fixed idea that will convert the previously capable and vigorous worker into a hypochondriac devoid of energy.—*Br. Med. Jour.*

SELF-INJURY IN HYSTERIA. — Krecke (*Munch. med. Woch.*) discusses a case at length in a woman, aged 61, under observation for thirteen years. Injuries are self-inflicted either on account of anticipated advantages, or owing to abnormal mental states. The injuries inflicted on themselves by the hysterical are mostly of a chronic character. In the above-named case the injuries were chiefly on the arms, legs, and face. Various forms of lesions were noted—reddening, blisters, old crusts, ulcers, and scars. They were made by means of a caustic alkali (*Laugenstein*). The author gives a short account of some of the well-known cases, such as those recorded by Strumpell, C. Fox, etc. These patients, as in his case, almost always present signs of hysteria. The author thinks that his patient first inflicted these injuries as the result of some imperative idea, and that later the comfortable hospital life played an important part in the etiology. The patient also suffered from mania operatoria. In the simplest cases the injuries are inflicted by means of friction with the nails and ends of the fingers, then by rubbing the bandage backwards and forwards, and lastly by a chemical agent. The question of diagnosis is important; the condition, if suspected, is generally recognized.—*Brit. Med. Jour.*

PATHOLOGY AND BACTERIOLOGY

IN CHARGE OF

H. B. ANDERSON, M.D., C.M.,

Pathologist to Toronto General Hospital; Professor of Pathology Trinity Medical College, and in charge of the Trinity Microscopic Pathological Laboratory, Toronto General Hospital.
233 Wellesley Street.

ULCERATIVE ENDOCARDITUS DUE TO THE GONOCOCCUS.

In a recent number of the *Archives de Médicine Expérimentale*, Thayer and Blumer report an interesting case of gonorrhœal septicæmia with endocarditis due to the gonococcus.

After speaking of the unsatisfactory evidence in many of the reported cases that the organism present was the gonococcus, the authors give the history of their case:

The patient was a female, thirty-four years of age, who entered the Johns Hopkins Hospital complaining of cough, feebleness, and general pains. The family history was negative, but she gave a previous history of two miscarriages. The present illness dated from an attack of rheumatism, which occurred three months previous to admission; in this attack most of the joints were affected, the pain being acute and passing rapidly from one joint to another; it was accompanied by very little swelling. The day previous to admission the patient had a severe chill.

On admission examination showed a slight enlargement of the heart, with a presystolic thrill at the apex; in the same region two murmurs were to be heard, a light sharply localized presystolic murmur and a soft systolic transmitted to the axilla and the base; the second pulmonic sound was accentuated. No malarial organisms were found in the blood. From the time of her entrance to that of her death, nineteen days later, the patient gradually emaciated; during this whole time she had daily exacerbations of temperature at very irregular intervals, and often accompanied by severe rigors.

Both the heart-murmurs had increased in intensity before death. The patient became very anæmic, the red corpuscles at the time of death numbering only a few over a milllon. The spleen was palpable from the first.

The autopsy, made two hours and a half after death, showed an acute ulcerative endocarditis of the mitral valve, sub-acute spleen-tumor, and infarcts in the lungs and spleen.

Microscopical examination showed the presence of gonococci in the valvular vegetations.

Cultures made from the blood during life on a mixture of blood and agar resulted in the growth of an organism morphologically resembling the gonococcus, decolorizing by Gram's method, and refusing to grow on ordinary media.

Cover-slips made at the autopsy from the vagina, uterus, and vegetations on the mitral valves showed a similar organism, which likewise failed to grow on ordinary media, and which decolorized by Gram's method. A mouse inoculated at the root of the tail with a portion of the valvular vegetations did not react.

The authors conclude that they are justified in believing that the organism isolated from the blood during life, and found on the valvular vegetations at autopsy, was the gonococcus, for the following reasons:

a. Its form and disposition were characteristic.

b. Though often free, the organism was often found within the protoplasm of the leucocytes in the valvular thrombus.

c. The organism did not develop on ordinary media.

d. It easily grew on a mixture of human blood and agar (one-third blood).

e. It decolorized by Gram's method.—*Archives de Médicine Expérimentale.*

PYLEPHLEBITIS AND ABSCESS OF THE LIVER FOLLOWING TYPHOID.—Lannois has recently described pylephlebitis and abscess of the liver following typhoid, in which the bacillus of Eberth was present in the pus from the abscess, though not in pure culture.

He states that liver-abscess following typhoid is very rare, occurring, according to Schultz, of Hamburg, once in thirty-six thousand and eighty cases.

Lannois divides abscess of the liver following typhoid into three classes:

a. Metastatic abscesses having an external suppurative focus as a point of origin.

b. Abscesses from typhoid ulceration of the biliary passages.

c. Abscesses due to pylephlebitis.

He places his case in the last class.

The case occurred in a man of twenty-eight years of age, and came on at the end of the attack,

the patient having been afebrile for three days. At the end of this time he was taken with a violent chill with fever, and the signs of pleural involvement at both bases. This was followed by swelling of the abdomen and great pain in the right hypochondrium. There were no positive physical signs in the abdomen, and the case was regarded as one of tubercular peritonitis on account of the pleural involvement and the swelling of the abdomen.

The patient died three days after admission, the autopsy showing healed ulcers in the ileum, and also partly healed ones, both in this part of the intestine and in the appendix. The vena portæ, the inferior mesenteric vein, and the splenic vein all contained adherent ante-mortem clots. In the liver a number of abscesses were found containing creamy yellowish pus. A number of organisms were present in the pus, and one was isolated which resembled the typhoid bacillus in every way, except that it slightly liquefied gelatin. The author ascribes the liquefaction to impure culture, and states that this is the only case recorded where a satisfactory bacteriological examination has been made.—*Revue de Médicine.*

Necropsy.—In the interests of euphony and accuracy of statement it seems desirable to direct attention to the words used by medical men to denote the pathologic examination after death.

The *Medical News* not long since admirably discussed these terms. The most frequently used term is at present undoubtedly *post mortem*, as all know two Latin words meaning "after death." This term is awkward and difficult to anglicise and has nothing to recommend it.

The next most frequently used term is "autopsy," derived from two Greek words meaning literally "to cut one's self;" the secondary meaning is, of course, "to cut for one's self," *i. e.*, so as to see for one's self the morbid anatomy.

In our opinion the preferable term, both by reason of its etymology, of its euphony, and of its clearness of meaning, is the word "necropsy." This means of course "to cut a dead body," and is, hence, accurate in significance. It is rapidly coming into general use among the best medical writers and speakers, and we would urge our readers to use this term in the future, both because its use is bound to spread and because of the good reasons stated above.—*Cleveland Med. Jour.*

Turercular Endocarditis.—Leyden, in a recent paper before the Berlin Verein fur innere Medicin (*Berliner klin. Wochenschrift*, 1896, No. 49), spoke at length on the connection of disease of the heart and tuberculosis. Besides giving a review of the historical aspect of the subject he mentioned some recent observations made in his clinic. In four cases of recent warty endocarditis tubercle-bacilli were found in the lesions. One of the patients, a woman, admitted with advanced tuberculosis, had a history of rheumatism. There was a systolic murmur. From the progress of the case a fresh endocarditis was diagnosticated. An autopsy confirmed the diagnosis. Tubercle-bacilli were present not only in the vegetations, but also in ante-mortem thrombi. An interesting feature was that the bacilli were largely in the cells. Leydon thinks that the bacilli do not enter the cells in the vegetations, but are transported by the cells, so that the latter, so far from protecting the body against infection, favor the spread of the bacilli.—*Am. Jovr. Med. Sc.*

Pathogenesis of Uræmia.—Ajello and Paraveandalo (*Lo Sperim*, an. 49, fasc 4), as the result of numerous experiments on animals, believe that uræmia is closely related to the presence or abscence of an internal renal secretion. Just as other glands have internal secretions, so has the kidney. The authors found that animals, after unilateral nephrectomy and without any treatment, died in from eight days to eleven months with albuminuria and cachexia. On the other hand, animals, after unilateral nephrectomy, when inoculated with renal juice prepared after the method of Brown-Sèquard and D'Arsonval (20 c.cm. injected daily in dogs, 10 c.cm. in rabbits), did not present any albuminuria or cachexia, and lived in good health until killed for other experiments. After double nephrectomy without treatment the animals died in four to forty-eight hours; if treated with renal juice they lived from forty-eight hours to four days and more. The implantation of kidneys, whether subcutaneously or in the peritoneal cavity, gave negative results.—*Brit. Med. Jour.*

Albuminuria Consecutive to Chloroform-inhalation.—Dr. Patein has made seventy-six observations, each one comprising specimens taken before anæsthesia, during anæthesia but before the operation, and after recovery from the anæthetic. Albuminuria was found before anæthesia in 12 per cent., during anæthesia but before the operation in 35 per cent., and after the operation in 73 per cent. of these cases. This albuminuria disappears generally by the end of two or three days, is not proportional to the duration of the anæthesia, and appears to depend solely upon the chloform. With patients who are already albuminuric, the quantity of albumin may be increased, but this is not generally, nor is there any fixed rule. The kidneys do not undergo any serious alteration, the uric acid and chlorides are generally more abundant, but there appears to be nothing more than a passage of serum-albumin at the glomerulus.—*Am. Jour. Med. Sc.*

NOSE AND THROAT

IN CHARGE OF

J. MURRAY McFARLANE, M. D.,

Laryngologist to St. Michael's Hospital. 32 Carlton St.

COMMON SORE THROATS.

In the *Lancet* for February 15th Dr. Clement Dukes, physician of the Rugby School, alludes to the imprtance of seeing invalids in the very earliest stage of their indisposition, as we are able then not only to learn the symptoms of the onset of the disease, but a circumstance of still greater moment to the individual patient, to place him early under the most favorable conditions as regards himself, and to isolate him if need be for the protection of others. In his very early days of office at the school, he says, he recognized the importance of knowing the condition of the throat in the young, it being, Involved in so many illnesses; consepuently the habit arose intuitively of looking at the throat of every boy who expressed himself as not feeling well, without waiting for any complaint from him concerning it. Whenever the least deviation from a healthy appearance was noticed, says the author, however trivialt strict isolation was enforced, and the patient was kept away from the healthy boys until he had quite recovered. In this way all ailments attended with sore throat, some of them of the greatest moment to the young, had been prevented from spreading. It is scarcely necessary to point out, he says, that it is the first cases that require attention and isolation if the diseases are to be limited in extent. On inspection of the throat in the young in the very earliest stage of its abnormity certain common conditions are discovered which gradually assume the various forms typical of recognized diseases, and these throats, says Dr. Dukes, are seen and the patients isolated often long before a diagnosis is possible. When a case can be diagnosticated at first sight, it is far too late for the the welfare of the individual and for the protection of others.

With regard to inflammatory sore throats, he says, the first stage of all the common sore throats, which are termed amygdalitis, is that the membrane of the fauces generally appears smooth, dry, glistening, and as if all secretion and the superficial layer of the mucous membrane had been scraped off and the surface polished. Many throats under treatment proceed no further than this stage. In the next condition this superficial layer of the mucous membrane is swollen, which causes it to assume a dusky-red velvet appearance, and this also may proceed no further. This is succeeded in a large proportion of cases by swelling of the tonsils, which gradually become covered with minute isolated white dots, which are occasioned by an excess of the normal secretion, owing to the inflammation, from the follicles of the tonsils. This secretion in certain cases—and these individuals usually have this kind of throat whenever they take cold—becomes so excessive as not only to appear at the orifices of the follicles, but to join one another until the surface of the tonsil becomes covered with a thick, soft, ashy-gray, dirty-looking membrane, but one which bears no more relation to diptheria than chicken-pox does to small-pox. The same individual invariably has the same kind of inflammatory throat, and whenever he takes cold it is in the form of, or accompanied by, a sore throat. In the last phase of these cases of amygdalitis the inflammation and swelling—often after a prior subsidence, so as to seem almost like a recurrence—increase, extend, and involve the soft palate, and a quinsy is formed. All these forms of amygdalitis, says the author, are infectious in the young, and they spread in the same way, but not to the same extent, as common colds.

Respecting septic sore throats, he says, which may arise from detective arrangements in the water supply, drainage, etc., he urges the necessity of flushing drains and emptying drinking-water cisterns and filters before the reassembling of school after each vacation.

The sore throat of scarlet fever in its initial stage consists of a diffuse, dull, brick-red appearance of the membrane or the fauces—in fact, it is a diffuse rash on the mucous membrane similar to that which occurs subsequently on the skin. It begins at, or at all events is most visible on, the wings of the soft palate, extending to the tip of the uvula, but it involves the whole of the mucous membrane of the fauces. In a large proportion of cases it begins and end in this, though in many it progresses to every phase of ulceration, which alone is sometimes difficult to assign to scarlet fever; but the character of the rash, together with the peeling tongue on the fourth day, leave little doubt as to the diagnosis. It is the slight sore throat accompanied by merely a transient rash which causes the main difficulty in diagnosis.

In the *sore throat of diphtheria*, at the onset,

there is usually a dark redness and swelling of the tonsils and the fauces generally, with very marked œdema of the uvula, which appearances are quite undistinguishable from acute amygdalitis. Hence, says Dr. Dukes, the necessity of at once isolating all patients with amygdalitis, as no one can possibly be sure what form of sore throat it will prove to be. Subsequently the whole or a part of the fauces becomes covered with a grayish secretion, sometimes assuming the character of a dense membrane like wet wash-leather, which arises in patches, and rarely in the small white regular dots which coalesce into a patch incidental to amygdalitis. These patches spread and may become continuous, involving the whole of the fauces.

The sore throat of varicella is occasioned by spots on the mouth and pharynx similar to those on the skin, and they often greatly resemble the small ulcers common to stomatitis, from which they are distinguishable by the eruption on the skin.

The *sore throat of epidemic rosela* (*Rotheln*) resembles closely the early stage of the throat of scarlet fever, but it is accompanied by very early enlargement of the posterior, cervical and other glands. There is no peeling of the tongue on the fourth day.—*N. Y. Med. Jour.*

TWO CASES OF CHANCRE OF THE TONSIL.

Mr. A——, æt. 32, married, consulted me on December 8, 1893, for a sore throat, of which he gave the following history: Seven weeks ago he began to have slight pain and soreness on the left side of his throat in the tonsillar region; this gave him little anxiety, as he frequently had sore throat from excessive cigarette smoking. Not improving after a week or ten days he consulted a physician, who prescribed a gargle which was used for some days without any relief. Two weeks later, while on a Western trip, he consulted another physician, and received tincture of iron and chlorate of potash to take internally and to gargle. On November 25th he returned home, feeling weak, and with considerable pain of a stinging character over the left tonsil and running into the left ear. The submaxillary gland of that side was slightly enlarged, and he felt the sore place on the tonsil with his finger, and describes it as a bare lump which seemed to pass up behind the soft palate.

On examination I found Mr. A—— looked pale, exhausted, and complaining of burning pain in the left side of pharynx and ear, especially severe at night, and accompanied by profuse perspiration, necessitating a change of night shirt. Temperature ranged from 99⅘° F., a.m., to 101° p.m., pulse 100, left tonsil moderately enlarged and very hard at its upper part. Its surface was red, and a small, superficial grayish-looking ulceration was apparent at the superior end of the tonsil; below this some grayish, sticky fluid adhered to the surface. Another small, grayish, superficial ulceration appeared on the anterior surface of the soft palate, just above the margin of the arch, and close to the uvula. The surrounding tissues were moderately red and hardened. The anterior and posterior pillars, especially the latter, were red and hard. The same condition extended to the left lateral fold of the pharynx and passed up behind the soft palate. The right tonsil and other parts of the pharynx and mouth were healthy.

There was little pain in swallowing. The left submaxillary gland was enlarged, but not tender. On questioning he admitted that about two weeks before his throat began to be sore, that "a friend" had put her tongue in his mouth a great many times while he kissed her. Some sputa and small pieces of grayish membrane taken from the ulcerated surface were referred to an expert microscopist, who reported as follows:

"Six cover-glass preparations from the well-teased specimen, double stained Nelson Ziehl method, fuchsin and methyl blue, were examined with a Zeiss apochromatic one twelfth homog. immers., and the four and five compensating eye-pieces failed to indicate the presence of any tubercle bacilli. Pieces of the membrane subjected to a special microscopic examination were found to possess the following characters:

"Fibrillar connective tissue, the greater portion consisting of intercellular substance, with isolated portions containing connective-tissue corpuscles and a few puss cells." Dr. A. H. Smith examined the lungs and pronounced them sound. Primary chancre of the tonsil was diagnosed, and two-grain tablets of hydrargyrum cum cretâ ordered every two hours, with a soothing gargle, and a hot bath every night. Three days later Mr. A—— appeared with a macular rash on the neck, arms, chest, and back. The throat had improved in appearance, and the hardness of the tonsil and submaxillary gland much lessened.

On December 22nd, fourteen days after my first examination, the sore on the tonsil and soft palate had healed, and the surrounding hardness of the tonsil and submaxillary gland nearly disappeared.

In June of this year I saw another case of chancre of the tonsil, but with several others, did not diagnosis for some time after first seeing it. It was supposed to be a later manifestation of syphilis, and treated with iodide of potash without any benefit. From further information obtained regarding the man's habits, and subsequent developments, it proved to be a primary affection of both tonsils which yielded at once to mercurial

treatment. Previous to reading Dr. L. Duncan Bulkley's report in the "Transactions of the Medical Society of the State of New York," I had supposed that a primary sore on the tonsil was extremely rare. It would seem, however, that its occurrence is not at all uncommon, but may be easily overlooked.—Walter F. Chappell, M.D., New York.

A NEW NASAL TABLET.

BY MURRAY M'FARLANE, M.D., TORONTO.

I have been for a long time dissatisfied with Seiler's and Dobell's solutions for cleansing purposes in nasal work, finding them too irritating in the great majority of cases and containing a large number of oils and antiseptics out of place in ordinary nasal disease without pus-formation. Looking around for some substitute that would consist of a slightly alkaline solution, as nearly the specific gravity of the blood-serum as possible, thereby preventing too much osmosis and endosmosis in the nasal cavity, I was taken with the fact that a tablet could be made containing the soluble salts of the blood-plasma, which, when added to two ounces of lukewarm water, would form a solution as nearly comparable with blood-plasma as possible.

Parke, Davis & Co. complied with my desires, making an excellent tablet containing the soluble potassium and sodium salts of the blood, with the addition of one-sixteenth of a grain of menthol to each. I have found it of great service as a cleansing agent, and have received a large number of letters from medical men who have tried the solution and found it answer the purpose in a very satisfactory manner. Parke, Davis & Co. will supply any desiring them.

The tablets are called "Plasma Nasal," and are added to two ounces of lukewarm water, and used as a spray for cleansing purposes, in the nose and throat, whenever a mild and non-irritating solution is desired. Those who make use of them and avoid astringents in the nasal cavity will find a gratifying result both for themselves and patients. —*Therapeutic Notes.*

A CASE OF TUBERCULOSIS OF THE THYROID GLAND.—I. G——, male, aged 15 years. Father died of phthisis at the age of 30. Two sisters died of the same disease in their twentieth year. Mother and three brothers alive and well. This patient was quite well up to his thirteenth year when he had a sore throat, which lasted about five days. Two months later the thyroid gland began to enlarge and became hard and tender. The anterior and posterior cervical glands underwent a similar change. This continued some three months, the skin over the thyroid region becoming red and gradually deepening in color until a small opening appeared over the isthmus of the thyroid from which a watery fluid, containing small white curdy masses, escaped. A troublesome cough and hoarseness appeared simultaneously with the enlargement of the thyroid, and has continued more or less ever since. On presenting himself at the Hospital in June, 1892, I found him considerably emaciated. Temperature 101 F., pulse 132; weight 80 pounds; the thyroid gland considerably enlarged and very hard, with some surrounding cellulitis and cervical and mesenteric adenitis, small abscess above the right clavicle, considerable dyspnœa and a constant desire to cough. A small sinus over the isthmusl of the thyroid gland, discharged a fluid already described, which was found to contain the tubercle bacillus. The apices of both lungs gave signs of advanced tuberculosis, and tubercle bacilli were found in great numbers in the sputa. The mucous membrane covering the vocal cords, arytenoid cartilages and posterior commissure of the larynx, was red and thickened; spasmodic cough and profuse perspiration caused much distress at night. The case is reported on account of the rarity of tuberculosis attacking the thyroid gland.—W. F. Chappell, M.D.

MEDICAL MEN TO AVOID. — The one who has acute exacerbations of insanity when exposed to any new fad. The one who is always successful with all his difficult operations. The one who always sees hundreds of cases of a rare disease. The one who can always match your case and improve on your treatment. The one who always finds you have omitted something in the examination of your case. The one who thinks he can talk well and is always ready to discuss any paper of the evening. The one who is always the first to do the new operation. The one who is in a chronic fear of being anticipated in his important discoveries. The one who in consultation feels it is his conscientious duty to explain to the patient why he differs with the attending physician.

THE ANTIVIVISECTION ACT is again to the front at Washington, D.C., where a bill has been introduced into both Houses of Congress for the purpose of curtailing the freedom of scientists in the matter of vivisection.

BLENNORRHAGIC VAGINITIS.—

℞—Pure creosote, ... 3 parts.
Solution of potassium hydrate, 3 parts.
Camphorated water, . . . 240 parts.

Sig.—Two dessertspoonfuls are injected two or three times a day into the vagina.

THE CANADA LANCET,

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* DR. J. L. DAVISON, 12 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P. O. Orders to be made payable to* DR. G. P. SYLVESTER, Business Manager, 585 Church St., Toronto.

AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John N.B.; Canadian Advertising Agency, 60 Watling St London. 5 Rue de la Bourse, Paris.

Editorial.

DR. LAUGHLIN McFARLANE.

It is our sad duty to record the death of one of the ablest and most popular members of the profession in Toronto—Dr. Laughlin McFarlane. Space will not permit us to say a tithe of what an affectionate remembrance of the genial, manly, inspiring Doctor brings to mind; but we sadly add our sincere tribute to the many great ones he has already received from some of the best and greatest men of our city and country.

Dr. McFarlane was born in Caledon Township, Ontario, 56 years ago, and from his earliest years showed the man he was to become. He began the study of medicine in 1864, at the Toronto School of Medicine, and received his degree of M.B. in 1867.

His abilities as a student, and his success in practice, soon got for him a position, that of Assistant Demonstrator of Anatomy in his *alma mater*. Shortly after he was appointed to the chair of Clinical Surgery, which position he honorably and efficiently filled till the day when he met his death in the performance of an operation connected with his office. For fifteen years he was an indefatigable worker on the Hospital staff.

His love for his profession brought him closely into touch with medical men everywhere, and he was an enthusiastic member of various medical societies, in which connection it will be remembered that he occupied the position of President of the Toronto Clinical Society and of the Ontario Medical Society. He was for 22 years a member of the Senate of Toronto University. While he was so well and favorably known through his public life, perhaps his best side will be known only to the individuals to whom he acted as firm friend and medical adviser—his patients. The Doctor had pre-eminently the power of winning and holding the confidence of his patients, to whom he acted the part of warm friend and counsellor. Many secret tears have been shed by persons who feel the loss of their beloved—we say it advisedly—physician and friend.

He was married in 1876 to Miss Bond, of Guelph, whom he leaves to mourn his loss. Mrs. McFarlane received from the Board of Trustees of the Toronto General Hospital the following resolution of condolence, which we think worthy of being repeated here :—

"The Trustees of the Toronto General Hospital record upon their Minutes the deep sense they entertain of the great loss sustained through the death of the late Laughlin McFarlane, Esq., M.D., one of the senior Surgeons on the acting Staff of the Hospital. They at the same time assure Mrs. McFarlane of their sincere sympathy with her in the loss of a devoted husband, and with the sorrowing relatives, who have lost a brother beloved, and a true friend.

"They look back with pleasure and gratitude to the noble devotion of Dr. McFarlane, during a period of fifteen years in the Hospital, where his skill as a surgeon, his kind words of cheerfulness, and his geniality of character, helped many a sad and suffering patient, and made him the trusted and common friend, not only of the patients, but of the whole Hospital staff.

"His sudden demise is keenly felt by all who knew him; but especially by those who were so intimately associated with him in the daily work of the Hospital.

"The Trustees feel and trust, that it may be some consolation to his many friends to remember that he nobly met his end in the performance of professional duty; and that his life was sacrificed in giving gratuitous services for the relief of a suffering human being, a stranger in a strange land, who was a patient in the public wards of the Toronto General Hospital."

We give with this issue a cut of our dear friend and fellow-laborer, which we are sure will be welcomed and treasured by thousands of his friends and admirers all over the Dominion.

As a rule, Dr. Cantrell prefers *lactic acid* over other caustics to be used about the face, because its action is so easily checked by dusting powdered starch over the part operated upon.

SURGICAL TREATMENT OF RETRO-DEVIATIONS OF THE UTERUS.

Dr. Augustin H. Goelet, of New York, in a paper read before the N. Y. State Medical Society, at Albany, declares that displacements of the uterus are not accorded the consideration they deserve, and that the routine plan of inserting a pessary and dismissing the case from further attention is an error too often committed. He thinks the majority of cases, especially those of long standing where structural changes have taken place in the walls of the organ, require surgical intervention for their cure. The pessary alone is never sufficient except, perhaps, in very recent cases. The concomitant metritis and endometritis must be overcome before a radical cure can be effected.

After discussing the merits of Alexander's operation, and the intraperitoneal methods of shortening the round ligaments and vaginal fixation, he described an operation for retroflexion which he has employed with success for the past twelve years.

The Alexander operation, which is only applicable in movable retro-deviations, he thinks unnecessary. Its chief disadvantage is the time it requires and the prolonged convalescence it entails.

Intraperitoneal shortening of the round ligaments requires more time for its execution, and the convalescence is longer than suspensio-uteri, and the results have not been so good.

Vaginal fixation is objectionable because it substitutes a fixed anteflexion for a movable posterior displacement. The recent unfavorable reports of complications during labor following it, offers another very serious objection to this operation. The best evidence of its inefficiency is that its originator, Mackinrodt, has abandoned it.

Where the uterus is fixed by firm adhesions, the author advocates opening the abdomen by means of a small incision, breaking them up and suspending the uterus by its posterior face from the anterior abdominal wall. This does not fix the organ as when ventro-fixation is done. In time the uterus recede from the abdominal wall, close to which it is first suspended, and swings in an easy position of nearly normal anteflexion. This he prefers to ventro-fixation because the uterus occupies a nearly normal position and is fairly movable. Its execution consumes less time than intra-peritoneal shortening of the round ligaments. The results have been very gratifying.

When the adhesions are not very firm or extensive, they are broken up by manipulations under anæsthesia without opening the peritoneal cavity, and the case is then treated in the same manner as when the organ is movable.

The method of procedure which he advocates in place of Alexander's operation in movable retro-deviations, has this to recommend it, viz.: that it aims at a cure of the co-existing metritis and endometritis, the maintaining cause of the displacement, and requires but a week's confinement in bed.

For retroversion he dilates the canal, curettes and packs the cavity with iodoform gauze. The vagina is then tamponed with the same gauze in such manner as to throw the uterus into a position of ante-version. This dressing is removed every day, the cavity is washed out with a one per cent. solution of lysol, and it is re-applied. This is done for a week, during which time the patient is confined to bed. Then a vaginal pessary is fixed to hold the uterus in a correct position. The cavity is then irrigated twice a week until a healthy endometrium is reproduced.

For retroflexion the same procedure is adopted, but instead of packing the uterus with gauze, a straight glass drainage stem is used which serves the purpose of a splint and keeps the uterus straight. It is then maintained in a position of ante-version by means of vaginal tampons of iodoform gauze. The gauze tampon and stem are removed every day, and after cleansing the stem it is re-inserted. At the end of a week the stem is removed, a vaginal pessary is inserted, and the patient is permitted to get up.

The success which he has obtained with this method leads him to believe that the other more complicated and hazardous operations designed for movable retro-deviations, are unnecessary.

TUBERCULIN.—At the Académie de Médecine M. Grasset read a paper on the early diagnosis of phthisis in man by means of injections of tuberculin, *Paris correspondent Med. Press.* Everyone understood the utility of detecting the nature of this malady in its incipient stage, but all practi-

tioners are well aware that the diagnosis is far from being easy and conclusive, for the bacilli do not appear in the expectoration until a relatively late period. The difficulties are still further increased where the tuberculosis is seated in the bones, the brain coverings, etc. Consequently, a new sign, if it be sure and without danger, is not to be despised. Tuberculin seems to furnish these two conditions, as testified by that great authority, M. Straus, who declared that "this substance constitutes an excellent diagnostic means in incipient phthisis."

The tuberculin was furnished M. Grasset for his experiments by the Pasteur Institute, and the dose employed was infinitesimal but sufficient, 150th of a grain. The mode of using is simple. The patient is kept in bed two or three days and his temperature taken morning and evening and marked. The hypodermic injection is then made once a day for two or three days or more, in the thigh, and the temperature carefully registered three times a day. No abscess follows or any local irritation. M. Grasset cited a series of cases in which he was able to arrive at an exact opinion on the nature of the affection. A man, æt. 43, entered the hospital presenting symptoms of rachidian meningitis, without any external sign of lesion of the vertebræ. For four months he had been suffering from inter-costal pains, coming on in paroxysms, the spine was painful to pressure, especially over the dorsal vertebræ. The left eye showed symptoms of exophthalmia, while the upper lid drooped. The body had evidently been wasting for some time. The temperature was normal, but after the injection of the tuberculin, it rose to 100°. M. Grasset pronounced the case to be one of tuberculous meningitis.

A patient, æt. 23, presented the symptoms of Addison's disease. He had a costo-vertebral cold abscess, which got well after operation. The bronzed coloring had commenced five months before he entered the hospital, and for the previous month he had a slight cough. At the apex of the lung in front, expiration was found to be slightly prolonged, and behind, vesicular expansion was diminished; there were no bacilli in the sputa. The temperature, which had been oscillating between 97° and 98°, rose to 100° six hours after the injection of tuberculin, justifying the tuberculous nature of the disease of the renal capsules.

After giving the details of several other cases (14 in all), the report concluded by stating that the results obtained warranted the prosecution of further clinical experiments which would permit the Academy one day to draw up instructions for diagnosis of tuberculosis in man by tuberculin, as it has been called upon to do in the case of the bovine species.

M. Weber read, in answer to a letter from the Minister of Agriculture, consulting the Academy on the value of tuberculin as a means of diagnosing tuberculous disease in the bovine species, a report, of which the following is an abstract.

Tuberculin at the dose of from six to ten grains provokes in tuberculous animals a rise of temperature attaining from two to five degrees, a reaction sufficient to affirm the existence of tuberculous lesions, in no matter how slight a degree, whereas the same dose has no appreciable effect on non-tuberculous animals, although they may be attacked by grave lesions of the lungs or of the other viscera. The febrile reaction appears between the twelfth and fifteenth hour after the injection, and lasts several hours. It was said that tuberculin produced no reaction in certain animals recognised tuberculous at the autopsy. The fact is true, but these animals are always in such an advanced stage of the malady that the diagnosis is easily made by the ordinary methods of examination without having recourse to tuberculin. The reproach was also made that tuberculin hastened the evolution of the disease. This objection has no foundation, for tuberculin presents no danger to the animal.

Nothing is so easy to-day as the removal of tuberculous disease from a stable; it is sufficient to submit all the animals to the tuberculin tests, separate the healthy animals from all those which show a reaction after the injection, disinfect the stable and allow no animal to enter it without careful examination.

In concluding, the speaker proposed the following resolution:—"Tuberculin is an excellent means of establishing the diagnosis of bovine tuberculosis, and its employment should be recommended."

THE USE OF VINEGAR TO PREVENT VOMITING AFTER CHLOROFORM INHALATION.—Lewin, *Revue de Chirurgie*, states that he has used this method

for the prevention of vomiting after chloroform anæsthesia in 174 cases. These embraced all kinds of operations. In 125 success was complete. In the remaining 49 cases vomiting occurred, but it was slight in amount and consisted mostly of glairy mucus. It usually occurred towards evening of the day of operation and ceased by 9 o'clock the next morning. The infrequency as well as mildness of the vomiting constituted a practical success, because under the usual chloroformization he has seen vomiting last three days.

Some of the patients vomited because the use of the vinegar cloth was not continued a sufficiently long time.

The following is the method of procedure: A piece of linen the size of a napkin is wet with ordinary vinegar; the surplus vinegar is wrung out and the cloth laid over the chloroform inhaler. This latter is then withdrawn from under the cloth without removing it. This is to prevent the patient respiring air which has not been impregnated with the vinegar vapor. The cloth should remain on the face as long as possible, and at least three hours. Should the cloth become dry by the evaporation of the vinegar, it should be again moistened. Should the patient desire to expectorate, a cloth or handkerchief is to be slipped beneath the cloth wet with the vinegar. The author claims that it is the sudden inspiration of pure air that causes nausea.

A CARICATURE OF AMERICA.—One of the most amusing descriptions of America is that which recently appeared in the *Nachrichten; Literary Digest.* It runs as follows: "America is a country in comparison to which Europe is but a small peninsula. The United States is an empire by whose side the powers of Europe appear as petty states. America is the land of unmeasured capacity and dimensions, the land of dollars and electricity, the land where the plains are wider, the rivers greater, the waterfalls higher, the bridges longer, the express trains faster, the catastrophes more horrible than in all Europe; the country where the buildings are taller, the rascals more numerous, the poor poorer, the millionaires richer, the thieves bolder, the murderers less bothered, and educated people more rare than anywhere else. It is the land in which the teeth are more false, the corsets tighter, diseases more dangerous, corruption more common, insanity more systematic, the summer hotter, the winter more chilly, fire warmer and ice colder, time more costly and men more restless than in sleepy old Europe. The land where old men are younger and youths older, the niggers blacker and the whites yellower than elsewhere, the land of immeasurable natural resources, and of the most prodigious avarice. In short: America is the land of the greatest contrasts, the craziest presumption, the most reckless hunt after the dollar; it is the land of everything colossal and unapproachable—the last, of course, from the American point of view."

THE RELATION BETWEEN THE SPECIFIC GRAVITY OF THE BLOOD AND ITS HÆMOGLOBIN PERCENTAGE. By F. C. Bush, B.S., and A. T. Kerr, Jr., B.S., under the direction of Herbert U. Williams, MD., of Buffalo.

After extended observations on the relation of the percentage of hæmoglobin in the blood to its specific gravity, these authors conclude, first, that the percentage of hæmoglobin in blood, in most cases, may be predicted from the specific gravity with sufficient accuracy to be valuable for clinical purposes; second, Fleischl's hæmometer is liable to an error of ten per cent.; third, Gowers's instrument is liable to an error even greater than that of Fleischl's; fourth, that the error in technique with the specific gravity method is likely to be very slight; fifth, in following up a case with Fleischl's or Gowers' instrument, very erroneous conclusions may be drawn. Mistakes may be made of five per cent. or ten per cent. too low one day, and five per cent. or ten per cent. too high on another day; sixth, in following up a case the specific gravity estimation seems to give very slight error, and even if from it the absolute percentage of hæmoglobin could not be determined, yet the relative increase or decrease of hæmoglobin from one day to another might be quite accurately estimated; seventh, because of its being based on the instrument of Fleischl, Hammerschlag's table is, of necessity, only approximately correct.

THE INFLUENCE OF MIND. — Great brain and nerve strain, as in insanity, says C. H. Hughes, M.D., brittles the bones; grief and fright blanches the face and hair; fear paralyzes the heart, de-

presses temperature, causes excessive and clammy perspiration ; anxiety arrests secretion and shrivels the skin ; remorse wastes away the body ; anger flushes the face and so fills the brain with blood that its vessels burst and the victims fall with apoplexy ; shame flushes the cheek, slows the heart and respiration ; sorrow shows itself in tears ; love and good fortune brighten the countenance and quicken the step and pulse and lift up the form ; while adversity and remorse sadden the face, slow the pulse, bend the form, and depress the bodily movements. These things, and many needless to mention, show us the potency of mental influence, through its proper neural channels, on the movements of the organism. We cannot deny them in regard to the stomach. On the contrary, as we see the systole of the heart arrested by emotion, so we see digestion stayed by disagreeable and depressing thought. Mental force, through psycho-neural media, pervades the body, and the stomach is not exempt from its invigorating or depressing influence over its physiologic functions.

Dr. Jameson.—Dr. J. Jameson, of Transvaal fame, is a Scotchman, forty-three years of age, his medical studies having been pursued in the University College—*Brit. Med. Jour.* Entering this institution in 1870, he became a member of the Royal College of Surgeons in 1875, and graduated as an M,B. and B.S. in the University of London in the same year, receiving the degree of M.D. in 1877. As house-surgeon under the late Professor John Marshall, house-physician under Sir Russell Reynolds, and resident medical officer to the University College Hospital, his early medical training started off propitiously. As a young man Dr. Jameson gave evidence of the same personal magnetism which has so endeared him to all sorts and conditions of men ; of generous instincts, though impulsive, there was nothing ignoble about him. Sir Cecil Rhodes, King Lobengula, and President Krüger have been patients of his, and all seem to be very grateful for the services rendered them during severe illnesses.

On the Influence of Ether and Chloroform upon the Kidney.—*Deutsche Zeitschrift fur Chirurgie ; Internat. Med. Mag.*

By a careful chemical and microscopic examination of the urine prior to and subsequent to narcosis by ether and chloroform, the author has studied, in one hundred and thirty cases, the relative action of the two anæsthetics upon the kidney, as evidenced by the alteration in the constituents of the urine and their relative amounts before and after narcosis.

He summarizes his study in the following conclusions :

1. Albuminuria that already exists is more frequently increased in amount by ether than by chloroform.

2. Albuminuria follows chloroform narcosis more frequently than other narcosis ; the proportion being thirty-two to twenty-five.

3. On the amyloid kidney their action is similar.

4. Tube-casts either accompanied by or without albumin follow the use of both drugs with equal frequency, but albumin disappears more rapidly after ether narcosis. This late action has been proven to be more harmful in the case of chloroform than in that of ether.

The author details an interesting case of necrosis of the parenchyma following chloroform narcosis.

How Austria Deals with Drunkards.—Austria proposes to deal with persistent drunkards by treating them as mentally incapable, and detaining them in special retreats for a term of two years—*Albany Med. Annals.* They may go in of their own accord or on compulsion, but cannot leave at will until their term has expired, except in certain cases on probation. Persons may be sent to the retreat either by order of the magistrate or on the petition of the parents or children, or of the husband and wife, or trustees, or of the chief of a lunatic asylum in which a drunkard may be detained. Inebriates may further be assigned to retreats by the action of the public prosecutor, or by the mayor of the town or village in which the habitual drunkard resides. In all cases the inebriate must be legally tried and convicted, the court being bound to hear witnesses, including the drunkard himself, as well as the doctors, more especially experts on mental diseases. The term of detention will be generally for two years, but the patient may be released on leave after one year, but will be confined again in case he relapses into his former bad habits.

STRYCHNINE IN PREGNANCY.—Olenyn has successfully used strychnine in sixteen cases for the correction of weak labor-pains, in doses of 1-32 to 1-25 grain twice daily, at intervals, during the last six or eight weeks of pregnancy, *Kansas City Med. Rec.* Four of these cases were anæmic primiparæ from nineteen to thirty-two years of age, with weak muscles; three were multiparæ under thirty years, with habitual weak labor-pains; four suffered from chronic metritis and had been pregnant at intervals of from three to twelve years; one patient had a small uterine fibroid; two had flabby uteri and relaxed abdominal walls; one had tertiary syphilis and general debility, and another diseased appendages with hysteria. In two primiparæ the forceps had to be used, and in one the child was dead; but in all the other cases delivery was rapid and regular and the children lived. The third stage lasted from ten to twenty minutes and *post-partum* contraction of the uterus was excellent.

SANMETTO IN RETENTION OF URINE.—Have given Sanmetto a good trial and find it one of the best preparations I have ever used. Case No. I. —John D., age 70, Ireland—has been troubled for a long time; unable to pass his urine. After treatment with other remedies with no benefit, placed him on Sanmetto with following results: The first day the pus increased in quantity, on second day diminished, by fourth day could urinate himself; before this he had to be catheterized. Dose one drachm every four hours for the first three days, afterwards one drachm three times a day. Discharged in ten days, a complete cure of cystitis. A. C. Forman, M.D., House Phys. Bayonne Hospt., Bayonne, N. J.

BRETHREN, BEWARE! — Let all medical men take a lesson from the dearly bought experience of Dr Playfair, the eminent and fashionable London doctor and author. He was mulcted in $60,000 damages for having made the statement to his wife that a Mrs. Kitson was unchaste. She communicated it to Sir James Kitson, the brother of Mr. Arthur Kitson, with the result that Sir James, who is a millionaire, withdrew an allowance of $12,500 which he was making to Mrs. Kitson after her separation from his brother. Mrs. Playfair is a sister of Sir James and Arthur Kitson. Of all women, doctor's wives should be discreet.

TREATMENT OF HÆMORRHOIDS.—Dr. Schmey, *Allg. Med. Centr. Ztg.*, recommends a simple means of treating hæmorrhoids which he has successfully employed in a number of cases, three of which are reported in detail. It consists in painting the nodules once daily with a 2 per cent. solution of nitrate of silver, which causes a gradual reduction in size without the least pain. In the cases reported the tumors had entirely disappeared in the course of one or two weeks. As there are many patients who positively refuse operative treatment this new procedure is well worthy of attention.

THE nutrient enemata of emulsified oil recommended by Professor Revilloid, of Geneva, are made as follows, *Pract.*:

℞—Ol. Morrhuæ . . . . . ℥ xviij.
Vitelli ovi n° . . . . . ij.
Aquæ calcis . . . . . ℥ xviij.

To diminish the irritability of the mucosa 7 per cent. of salt can be added. The cod-liver oil may be replaced by olive oil. The injection should preferably be made at bedtime, commencing with a dose of four ounces, and increasing afterwards to twelve or fourteen ounces.

INCONTINENCE OF URINE:

℞—Strychniæ sulph., ... gr. j.
Pulv. canthardis, ... gr. ij.
Morphiæ sulph., ... gr. iss.
Ferri redacti, ... gr. xx.—M. Ft. pil. no. xl.

Sig.—One pill thrice daily to a child ten year old.—*Gross.*

IMPOTENCE:

℞—Tinct. phosphori, ... ♏ iss.
Tinct. cantharidis, ... ℥ iijss.
Elixir simplicis, . . . ad ℥ v.—M.

Sig.—One teaspoonful three or four hours before retiring. Increase the dose carefully.—*Van Buren and Keyes.*

At Johns Hopkins University on the 22nd ult. the degree of Doctor of Philosophy was conferred on Mr. Harry L. Wilson, a graduate of Queen's College.

A. B. Griffiths, Ph.D., F.R.S. (Edin.), F.C.S., says "I have made an examination of Stearns' Wine of Cod Liver Oil with Peptonate of Iron. It is an excellent preparation and contains the leucomaines, alkaloids or active principles of Cod Liver Oil with Peptonate of Iron. The alkaloids of Cod Liver Oil were first isolated by my friend Professor Armand Gautier of Paris; and they are not products of decomposition, as some writers (who know very little about the animal alkaloids) assert, but occur in the fresh liver of the cod, being produced by living cells—in other words they are true leucomaines. There is no doubt that the alkaloids of Cod Liver Oil are the active principles, as the percentages of iodine and bromine present in the oil are extremely small, and some oils, especially those that are light colored, contain none of these elements. At most, there is but 0.000322 per cent. of iodine present, a quantity which is too small to be of practical benefit. The same may be said of the bromine.

Note to Contributors.—Authors will receive liberal compensation for accepted articles after publication; or reprints, if stated on the manuscript, will be furnished in lieu of the honorarium. It is distinctly understood that all articles appearing as original matter are for our exclusive use, and are not to be reprinted or to appear in any other publication excepting the Transactions of the Society before which the paper may have been read. Illustrated papers are especially desired Communications on all matters of business should be sent to Dr. G. P. Sylvester, 585 Church St., Toronto. Manuscripts, exchanges, and books for review should be addressed to the Editor's Office, 12 Charles St., Toronto.

Books and Pamphlets.

Electricity in Electro-Therapeutics. By Edwin J. Houston, Ph. D., and A. E. Kennelly, Sc. D., two electricians holding high rank in the electrical profession. 412 pp., and 128 illustrations. $1.00. New York: The W. J. Johnston Co.

Prof. Houston has served two terms as President of the American Institute of Electrical Engineers, and is a co-inventor of the well-known Thomson-Houston system of electric lighting. He has given special attention to electricity as applied in electro-therapeutics, in which department he is a lecturer in medical courses.

Mr. Kennelly has made many contributions to the higher branches of electrical science, and at the same time is widely known from his connection with its practical applications. For many years he was the principal assistant of Thomas A. Edison, and is the inventor of several pieces of commercial therapeutic apparatus. Mr. Kennelly is a Vice-President of the American Institute of Electrical Engineers.

The combination possessed by these authors, of a thorough knowledge of electrical science, together with an extended acquaintance in the field of electro-therapeutics, should peculiarly qualify them for the task which they undertook in the preparation of this volume. There is reason to believe, that the result of their work will meet in a high degree the requirements of physicians who desire to read a treatise on the fundamental electrical principles of electro-therapeutics, which is at once authoritative and expressed in simple language requiring no special training in electrical science to understand.

A Text-Book upon the Pathogenic Bacteria for Students of Medicine and Physicians. By Joseph McFarland, M.D., Demonstrator of Pathological Histology and Lecturer on Bacteriology in the Medical Department of the University of Pennsylvania, etc. With 113 illustrations. Philadelphia: W. B. Saunders, 925 Walnut Street. 1896.

This conveys to the reader a concise account of the technical procedures necessary in the study of bacteriology, a brief description of the life-history of the important pathogenic bateria, and sufficient description of the pathological lesions accompanying the micro-organismal invasions to give an idea of the origin of symptoms, and the cause of death. It is a work of 350 pages, and deals with such diseases as tuberculosis, leprosy, glanders, syphilis, actinomycosis, madura foot, rhinoscleroma, diphtheria, tetanus, rabies, anthrax, typhoid fever, cholera, pneumonia, relapsing fever, influenza, malignant œdema, measles, bubonic plague, chicken cholera, mouse septicæmia, typhus, and the various septic conditions induced by germs found in suppurative processes. The aim of the work has been to describe only such bacteria as can be proven pathogenic, and will surely find its proper sphere of usefulness in the hands of

medical students. Its pages will, however, be found to contain much knowledge and interest to the general practitioner. The illustrations are as good as the world affords, and are equal to anything covering the ground. Price $2.50.

A TREATISE ON THE DISEASES OF INFANCY AND CHILDHOOD. By J. Lewis Smith, M. D., Clinical Professor of Diseases of Children in the Bellevue Hospital Medical College, New York. New (8th) edition, thoroughly revised and rewritten and much enlarged. Handsome octavo of over 900 pp., with about 250 illus. and 4 full-page colored plates. Philadelphia: Lea Bros & Co. Toronto: Carveth & Co.

The leading position achieved by *Smith on Children* as the standard text-book and work of reference on its important subject is shown by the demand for eight editions. The opportunity has thus been afforded to the author to revise the work repeatedly and to keep it always in touch with the advances in its department. In the present issue the subject of surgical diseases of children has been added, this portion being treated by Dr. Stephen Smith, whose own work on *Operative Surgery* is well known. The new edition of the *Diseases of Children* is therefore not only thoroughly revised, but also greatly enlarged, and it will be used by students and practitioners as a complete and authoritative guide to the surgical as well as the medical aspects of the diseases of childhood. The new issue will contain five times as many illustrations as its predecessor.

AN ATLAS OF THE NORMAL AND PATHOLOGICAL NERVOUS SYSTEMS. By Dr. Christfried Jakob. New York: William Wood & Co.

We have examined the above work with much pleasure, recognizing the fact that the best method of teaching nervous diseases is by illustrations. Dr. Jakob has compiled this work with that object in view and has given, so far as is compatible with the size of the book, an excellent general idea of the whole ground. The plates on Normal Anatomy are very, very practical, since he devotes his attention more especially to those parts of the brain which are most frequently the seat of disease. Hence the internal capsule is well shown, first, by horizontal sections and then by vertical ones, the latter demonstrating clearly how the posterior limb passes into the cerebral peduncle. The photographs of the cross sections of the cord are good and give a clear idea of the relations of the various structures in the vertebral canal to one another. The plates on Embryotomy, the origin of the cranial nerves and of the ganglion cells are also good. This portion of the book will be found useful to the student who desires to obtain a concise idea of the anatomy of the nervous system, and who intends pursuing its study in larger and more comprehensive works.

The plates devoted to Pathology are excellent, and the synopsis of the disease which accompanies each lends a greatly increased interest to the case. The general pathology and therapeutics is all that could be desired in a book of this size. We have much pleasure in recommending the work to any one who desires to obtain a clear and concise knowledge of the nervous system and the diseases to which it is exposed.

ATLAS OF TRAUMATIC, FRACTURES AND LUXATIONS. With a Brief Treatise. By H. Helferich, M.D., Greifswald. With 166 illustrations after original drawings, by Dr. Jos. Trumpp. New York: William Wood & Co. 1896.

This is one of a series of atlases on medical and surgical science which, as the publishers say, "for accuracy, beauty and compactness is believed to exceed anything heretofore produced." This is the finest work of the sort we have seen. The plates are in varied tints and colors, and are splendid reproductions of the lesions. There are from fifty to seventy-five or more full-page plates in each volume, and accompanied by a condensed outline of the subject to which it is devoted. This publication is worthy of perusal, as a book of reference it is invaluable.

Births, Marriages, Deaths.

The charge for inserting notice of births, marriages and deaths is fifty cents each insertion.

BIRTHS.

CLOUSE.—On Thursday, March 5th, the wife of Dr. E. Clouse, of a son.

SPENCER.—On March 5th, at 8 Bloor Street East, the wife of Bertram Spencer, of a daughter.

ROSS.—At Toronto, March 17th, the wife of J. F. W. Ross, M.D., of a daughter.

DEATH.

BALDWIN.—At Hamilton, March 3rd, 1896, Ridley Warren Baldwin, aged 2 years 5 months, son of Dr. W. Warren Baldwin, Toronto.

The Canada Lancet.

VOL. XXVIII. | TORONTO, MAY, 1896. | No. 9.

WHAT SHALL WE DO WITH OUR ALCOHOLIC INEBRIATES?

By J. W. Grosvenor, A.M., M.D., Buffalo, N. Y.

The term inebriate in this paper will refer to all shades and degrees of inebriety. The person who is drinking moderately, or having his first drunk, is inebriated as well as the habitual drunkard. The difference between these two classes of inebriates is only in degree. The proper care of the alcoholic inebriate is a problem whose solution has had assiduous thought and profound study from time almost immemorial. Wise statesmen and broad philanthropists have given it their best energies. The medical profession has not been unmindful of its importance, as evidenced by the great mass of literature upon it published in medical journals, and by discussions at medical meetings. So thoroughly has this field been cultivated that nothing new or startling will be attempted in this paper by way of enumerating the evils of inebriety or recommending a plan for their cure. The continued existence of these evils, apparently without abatement, and a great lack of unanimity of opinion upon the best means to be used for their restriction and suppression, are a full warrant for the discussion of this question at every convenient opportunity; indeed, it calls loudly to the medical profession for an enlightened and persistent consideration, and an answer which will meet the exigencies of the situation.

The alcoholic drink-bill of the nations is appalling. It easily foots up into many billions annually. Concerning the death-rate from alcoholic inebriety it is doubtful if reliable statistics are obtainable. Estimates carefully made on this point by competent writers state that it carries to the grave yearly from 60,000 to 100,000 of our citizens. The observation of the writer has led him to the conclusion that oftentimes deaths from alcoholic inebriety are reported by attending physicians as due to some other disease out of regard for the sensitive feelings of friends. Even though the above-estimated death-rate may be regarded as too large there is no doubt that the death-rate from this disease is very great, running up annually into scores of thousands; indirectly it is probably responsible for a far greater number than 100,000. It is the foundation of many diseased conditions of the nervous system, liver, heart, kidneys, lungs; indeed, the inebriate is likely to suffer from a perversion of nearly all the solids and fluids of the body. Not infrequently the inebriated life ends in insanity, idiocy, epilepsy, fatty degeneration of the heart, cirrhosis of the liver, paralysis, Bright's disease of the kidneys, phthisis pulmonalis.

The number of yearly arrests for drunkenness in all our large cities points to an increase of this disease. During 1894 in New York City there were made 19,538 arrests for drunkenness, as shown by records of the police department. In Great Britain in 1890 there were 173,036 convictions for drunkenness. In 1892 33,000 women were convicted for drunkenness in the same country. Dr. Crothers has estimated that a million and a half of the inhabitants of the United States are constantly suffering from alcoholic inebriety. It has been estimated that in Great Britain there are 700,000 habitual drunkards.

Oftentimes heredity plays a large part in the life of the alcoholic inebriate. The appetite for

alcoholic intoxicants received from some ancestor leads on to dipsomania and a thousand ills of the flesh, to distortion of the intellect and immorality.

Alcoholic inebriety is the prolific mother of crime and poverty; it disturbs the inalienable rights of the peaceful citizen and imposes a heavy burden upon the taxpayer; no other force is so potent in undermining the integrity of our national life. Accurate statistics relating to murders committed by alcoholic inebriates are not readily obtainable and are more or less unreliable. Coroners in reporting such cases are not always careful to state that inebriety was their genuine cause. Compilers do not always mention the cause of murder, even though it may have been stated correctly. Such statistics do not declare the whole truth, and hence are misleading. A prominent liquor paper concedes that nearly 500 murders are committed annually in this country as the result of alcoholic inebriety. Dr. Story states that the number of murders from drunkenness annually committed in the United States is 600. According to a high license journal 1130 murders were caused by liquor in the United States in one year. Remarks similar to the above are applicable to the difficulty of obtaining accurate statistics concerning those suicides which are committed by the alcoholized maniac. The real cause of the suicide is often buried under a wrong name. The reader of a daily paper of any of our large cities must be satisfied that the suicides from this disease are very numerous. Dr. Story places the annual number in the United States at 400. In 1893 in Prussia occurred 500 suicides among inebriates. Prof. Westergaard has said that out of 100 suicides in Denmark forty-four were notorious drunkards. In France 401 was the number of suicides from drunkenness in 1866.

Alcoholic inebriety plays an important rôle as a cause of accidents. The shipmaster, railroad engineer, trolley motorman, cable gripman, coachman, and all kinds of vehicle-drivers, inebriated by alcohol send many an innocent victim to death. The alcoholized brain of husband and father is responsible for many disfigured wives and crippled children. I forbear to present in detail more of the evils for which alcoholic inebriety is directly responsible. Their severity and universality are well known. By their enormity and ever-increasing outflow they are a constant menace to the stability of the republic. Their restriction and extirpation demand the best services of physician, philanthropist and citizen.

For the requirements of this paper alcoholic inebriates may be classified in accordance with their drinking habit as follows:

1. The moderate drinker.
2. The excessive drinker.

The moderate drinker takes a class of liquor occasionally, say of wine or beer, with his daily meals or socially with a friend in the evening and once in a while some stronger alcoholic beverage. Perhaps, at long intervals, he may drink enough to become slightly intoxicated. As soon as his drinking habits have carried him to the point where his intellect and physical system have become visibly affected, as shown by his conduct, he may be properly classed with the excessive drinkers. Notwithstanding his moderation he is daily poisoning himself with alcohol; he is an inebriate and is suffering from the disease of alcoholic inebriety.

What shall be done for the moderate inebriate? As long as he keeps within the bounds of decency, has not become a nuisance, is able to take care of himself, his family, and his property intelligently, is not a menace to the peace and welfare of society, has committed no crime, the law cannot take any cognizance of his acts. He may be guilty of withholding from those naturally dependent on him, from society and from the State his best services, but for this the law cannot punish him and can place upon him no restraint. The total abandonment of the drinking habit is all-important for this class of drinkers. As long as the habit is continued, fuel is being added to a fire which is gradually destroying the physical and mental integrity. All reasonable methods which will accomplish this object should be adopted. In this matter the medical profession has an obligation which it should discharge with strict fidelity. In doing so it should become a wise counselor and teacher. On account of its anæsthetic property alcohol is a deceiver, and hence the moderate taker of it may not realize its damaging effects till he has been using it for many years. He may call his physician for a disease which is the result of his ingestion of alcohol. Then is the time when the wise and humane doctor, without being subject to the charge of

intermeddling, can and should clearly and forcibly point out to his patient the dangers of the road which he is travelling and the goal of a wretched life which he is sure to reach if he does not abandon his inebriating habit. The physician who does not adopt this course does not assume the high privilege to which his position entitles him, and fails to do his duty to the patient under his care : his professional obligation binds him to aid the weakened will by all forces at his command, and by proper regimen and medication to restore, if possible, the injured system to its former healthy condition.

By public addresses, magazine and newspaper articles, private conversation, and especially by example, the members of the medical profession can teach influential lessons on this subject to the communities in which they reside. They can show the poisonous nature of alcoholic beverages, their ravages upon the various organs of the body, even when taken moderately, their power to weaken the will and moral sense, their inutility in aiding the vital processes of the healthy body and in conducing to longevity, the danger that a moderate habit will lead to an excessive habit. The people will listen more attentively to such teachings from the medical profession than from any other source. This is a work to be done in behalf of hygiene and along the line of preventive medicine. The physician can find no broader field for the exercise of his noblest powers.

The excessive inebriate is generally the outgrowth of the moderate inebriate. He drinks to such an extent that the alcohol makes a profound impression on his system ; one or more of the diseases of which alcohol is the prominent causal factor, fastens upon him ; the nervous system is specially affected, as shown by unsteady gait, trembling hands, altered speech ; those phases of inebriety known as delirium tremens and dipsomania may follow ; mental alienation is oftentimes a sequence ; the victim may become demented ; the baser faculties are roused to increased activity and control the moral forces ; the man is overwhelmed by bad passions and may commit crimes of all kinds and degrees. The excessive inebriate is a diseased, degenerated individual. He belongs to the vast army of defectives ; he is a dangerous character, a constant menace to the welfare of home, the peace and good order of society ; at times he may have the appearance of comparative physical health and mental soundness, may even attend to his business with a certain degree of exactness, but the hour when the alcoholic poison will assume dominion over him no one can foretell ; his relation to his environment is very similar to that of an insane person, and to a large extent he should be treated as are the insane ; indeed his case often assumes a form of insanity.

For the treatment of the excessive inebriate many plans and devices have been suggested—some being the product of dense ignorance and a barbarian age, others, the outcome of an enlightened spirit of scientific investigation. The inebriate will not receive the best treatment for restoration to physicial and mental health until alcoholic inebriety has been clearly recognized as a disease both by the medical profession and the laity. All along the centuries the excesses of the habitual drunkard have been regarded as of sufficient importance to call for restraint and punishment. The severe laws of Draco punished drunkenness with death. In the early history of the Massachusetts colony each offence of treating and drinking to the health of another was punished by a fine of fourteen pence. In St. Petersburg at the present day, "Any one found drunk in the street is imprisoned from one to three days, and the person from whom the last drink was bought, if he can be found, is fined from five to twenty-five roubles." The present law of Minnesota punishes drunkards with fine and imprisonment. Massachusetts has a law which makes imprisonment the only punishment for drunkenness. In Sweden, if a man is seen drunk four times he is deprived of his electoral vote. By advice of its best physicians, Saxony has made drunkenness a crime.

During the last twenty-five years homes for the alcoholic inebriated of both a private and public character have been established in this country and in Europe. Dr. Crothers is authority for the statement that in 1887 there were fifty hospitals in America for the treatment of inebriety, with over 1000 patients, besides about 1000 under treatment in private families. In a few instances inebriate hospitals have been founded and are supported by public moneys.

The particular method of treatment adopted for the excessive inebriate has depended largely upon the view taken of his condition. He has been

regarded as diseased, as vicious and as a criminal. The physician who makes inebriety a specialty insists upon medical treatment; the reformer advocates moral suasion and a strengthening of the will by educational influences; the magistrate adopts a system of fines and imprisonment. It is my belief that the alcoholic inebriate has all three characteristics. He is suffering from disease, has adopted a vicious habit, and not infrequently commits crime. His disease, which is the result of heredity or a vicious custom, demands the serious attention and profound skill of his physician. In its early stages it should not be neglected, as is too often the case. As a general rule neither the inebriate himself nor his family apprehends any danger until his inebriated condition has become chronic and he has gone far on the road which leads to delirium tremens or dipsomania or dementia; indeed, the suggestion that he requires any formal or persistent treatment in the early period of his malady is met with a positive denial. But this stage of the disease is the most hopeful for restoration to former soundness of mind and body; this is the time for friends and physicians to be alert, for *now* considerate care and treatment may save from disappointment and ruin. Treatment in a hospital specially adapted for the purpose has many advantages over treatment at home. The patient will be placed outside of an environment which has contributed to a continuance of his vicious habit, he will be prevented from transmitting any of his characteristics to a future generation, he will be kept from committing crime, he will be under the superintendence of physicians who have made his disease a special study; he will have the constant care of attendants who have been trained for special work. But hospital treatment will not be of permanent utility unless sufficient time has been given to it for a thorough restoration to soundness. The custom of confining an inebriate to a hospital for a single month, or in many cases for several months, fails, as a general rule, to accomplish the object of the confinement. Not infrequently several years of treatment are needful to repair the damages of many years of indulgence. Statistics of hospital treatment show permanent cures in from one-third to one-half the cases. Incurable cases of alcoholic inebriety should be placed in a hospital for incurables.

No case of drunkenness should be allowed upon the public streets or in a public place. A drunken person is a nuisance and dangerous to the public welfare. Although the habitual drunkard may never have been disorderly, nor in any way disturbed the peace, no foresight can determine how long he will be free from criminal intent; at any moment he is liable to commit an assault or murder. All persons when drunken in public should be arrested and brought before a magistrate for trial. The long-continued and almost universal practice of imposing a fine and committing to jail for a few days should no longer exist. In cases in which no crime has been committed the inebriate should be sent to an inebriate hospital for treatment until he is cured. If a crime has been committed an expert commission of medical men should determine whether the inebriated criminal was responsible for his crime; if responsible he may be incarcerated for a term of years in an institution where he can receive proper treatment for the cure of his inebriety. Every case of alcholic inebriety brought before a magistrate should be investigated by a medical commission appointed for the purpose and upon its report should be based the magistrate's decision. The records of our own and foreign courts show through many years of trial that punishment has had a very meagre outcome in restoration to health and permanent moral improvement. Such a course of procedure as is adopted in most of our courts is a relic of the dark ages and should be tolerated no longer by an enlightened people. Field says: "The records of the workhouse show that it has no effect to deter men from drinking and one woman was sentenced twenty-eight times in twenty-five months." Dana states that "The number of persons arrested for intoxication in New York City every year is about 30,000; most of these are fined or sent to the Island or both.' Henry O'Neill, of Belfast, Ireland, mentions a woman fifty-five years of age who was fined for drunkenness in a public court in that city and who had been previously convicted ninety-two times; also a woman forty years of age who was fined and who had a previous record of 140 convictions; also of a woman who was fined and who had been before the court previously 170 times.

In looking over our country I am forced to the conclusion that as citizens and physicians we are

doing far too little for the inebriated portion of our population. Since by inhuman laws we permit the sale of alcoholic intoxicants as beverages and thus encourage inebriety surely we ought to repair so far as possible the damages for which in large measure we are responsible. It has been said that a government should enact such laws as will make it hard for citizens to do wrong and easy to do right.

There seems to exist no good reason why, both from private and public sources, the insane should have larger and more humane provisions than the alcoholic inebriate. The comparatively few private institutions for the cure of inebriety scattered through the country and the less than half a dozen public inebriate hospitals should be supplemented by at least one such hospital maintained by public expense in every State; and, in many States there should be several. For the reformation and care of their inmates these hospitals should be equipped with all the appliances which the most advanced thought of the age can suggest and money can supply; including a gymnasium, lecture-hall, reading-room and library. With each one should be connected an industrial department, and work by every inmate should be compulsory. A military training school may also be a useful adjunct to such an institution. For the superintendence of each should be selected a physician who has made inebriety a special study and has a practical knowledge of the best methods of its cure.

The cost of erecting, equipping, and maintaining such hospitals the State would soon save in the lessened expense attached to murder, suicide, theft, arson, accident, disease, poverty caused by the inebriate permitted to run at large. To these institutions should be sent all excessive inebriates except such as belong to families that will convert their own homes into private inebriate hospitals. Those inebriates who will not enter a hospital voluntarily should be compelled to do so by the strong arm of the law. The inebriate without estate who is under State care should be supported by State moneys. His family also should have necessary aid from the State during detention. This method is in vogue in one of the cantons of Switzerland. These establishments should resemble as far as possible well-ordered homes.

The author of this paper does not wish to be understood as condoning the crimes of responsible criminals, but as recommending the abandonment of many barbarous methods now in use for the punishment of the alcoholic inebriate, and as advocating a reasonable method of treatment for his reformation and cure in consonance with the enlightened and scientific spirit of these last years of the nineteenth century.

The special thoughts which have forced themselves upon my attention in the study of this subject may be summarized as follows:

The importance of this question is shown by the magnitude of the evils of inebriety and their disastrous effects upon individuals, communities, and the nation.

The prime factor in the treatment of both the moderate and excessive inebriate is the total abandonment of the drinking habit.

For many reasons the alcoholic inebriate can be treated more successfully in an inebriate hospital properly equipped and wisely managed than in any other place.

Compulsory committal to an inebriate hospital and detention therein until cured, should be made lawful for all excessive alcoholic inebriates, who will not enter such an institution and submit to proper restraint voluntarily.

The prevailing mode of punishing the alcoholic inebriate by fine and incarceration in an ordinary jail or prison should be abandoned.

The cases of all alcoholic inebriates who are arrested and brought before a magistrate, should be disposed of in accordance with the report of a medical commission.

The inebriated criminal found responsible for his crime should be confined to an institution where he will receive proper treatment for his disease.

State care and control of the alcoholic inebriate should be the persistent policy of every State in the Union.

The medical profession should make a vigorous protest against placing in a cold, damp cell of a police station, without medical care, those persons who are found on the street in an unconscious or semi-conscious state of drunkenness. Such cases require warm, comfortable quarters and medical attendance.

The alcoholic inebriate will not receive appropriate treatment until the prime workers in the fields of medical science and philanthrophy have recognized him as a defective, diseased, dependent, dangerous member of society.

ACUTE BRONCHO-PNEUMONIA.

BY P. D. GOLDSMITH, M.D., PETERBORO', ONT.

This disease is so prevalent and so fatal in this country at this season of the year, that I venture to bring it before you for discussion. It is an inflammation affecting the mucous membrane lining, the bronchial endings, bronchioles and air cells in connection with it, making up a lobule. In severe cases the inflammation is not confined here but may extend so as to include any part of lung tissue. This diseased condition never begins in air vesicles, and it therefore is bronchial before it is pulmonary, and its extension from the finer tubes to alveoli is very easily and sometimes very quickly accomplished.

It forms the most serious and fatal complication of measles, influenza, whooping-cough and diphtheria. It is most frequent in children under two years, and during the winter months, when bronchial affections predominate. Quite commonly met with in old people who are debilitated from any cause, especially from catarrhal affections and chronic Bright's disease, but much more frequent in the young, especially before the fifth year; the most dangerous period being anytime before the end of the second year. Age is, therefore, an important point in reference to fatality.

Exposure to cold, changes of temperature and humidity are very common exciting causes. Unsanitary surroundings and debilitated conditions predispose. It certainly seems most unwise that young children should be allowed on the streets in quite cold weather with dress well above the knees and short socks. Inhalation of iritating particles and gases, operations about mouth and nose favor the production of this malady. Every acute and chronic affection of much severity gives conditions favorable to the production if broncho-pneumonia.

The very sick expectorate badly; mostly lie on the back and thus favor the accumulation of secretions Pieces of food, fungi and bacteria also collect. Decomposition and bacteria developments readily take place. Now, in the benumbed condition of the very ill these collections are badly got rid of and during inspiration may be further and further drawn into the bronchi or gravitate to dependent parts till the alveoli are reached and broncho-pneumonia results. It is in this way that this disease is produced in typhoid fever, erysipelas, neuralgia, chronic diarrhœa, etc.

This inhalation form of the disease is also readily produced in bulbar affections, bronchiectasis and hæmoptysis. Tubercles will produce a very fatal form of broncho-pneumonia. The badly housed, badly fed, badly cleaned, scrofulous, rickety, weakly children, are the first to fall victims. It is nearly as fatal a disease among children in cold damp, weather as "intestinal indigestion" is during the hot, dry months of summer.

In the young, the air sacs are much like dilatations of bronchial endings, and their structure is loose and yielding. Epithelium is readily shed and re-formed. Connective tissue is delicate and tends to abundant cell proliferation. Peri-alveolar and peri-bronchial inflammation will produce pressure. Congestion of vessels and swelling of mucous membrane all combine to produce obstruction. Tenacious mucus in early stages acting as a valve, and mucus and pus in later stages, with weakened muscular action, aid in the production of obstruction and collapse. The disease may advance rapidly, and quickly involve large tracts of lung; or it may advance slowly and gradually, taking weeks of time. Its course is usually very irregular. I could not easily exaggerate the great importance of simple bronchitis in young infants. Increased liability to recurrence must always be expected, and it must be remembered that it is very easy for a severe case of broncho-pneumonia to come out of a mild case of simple bronchitis. Many a case of broncho-pneumonia would be avoided, if simple bronchitis had more attention. Not infrequently, we are called hastily to see a child in convulsions, and you find a temperature of 102° or 103°, pulse 140, respirations 50. You find the child has been ill two or more

days with simple bronchitis, but yet has been playing around the house and perhaps out of doors, and, from exposure, has got an extension of the disease,—and you have broncho-pneumonia out of a simple bronchitis. See this child in seven or eight hours more, and you find temperature still higher, pulse more rapid and respirations very frequent, and a constant hacking cough, expiratory moan, anxious facial expression, and great desire for air. Usually, the change from simple bronchitis to broncho-pneumonia is not so sudden as this, nor is it usually marked by a convulsion.

It is very usual, however, to find that a cough has existed for a few days before the serious illness began. Temperature ascends irregularly, and often reaches 105°. Respiration becomes very rapid and irregular—70, 80 and even 90 is not uncommon. Pulse reaches 160 or 170, or 200 per minute. Some diarrhœa and vomiting at beginning of acute stage ; vomiting is not lasting, but diarrhœa may continue.

When fresh areas of lung become involved and collapsed, breathing is more difficult, and all symptoms are much more severe. If areas are large, temperature may fall, cough cease, skin get moist and cool, the pale countenance gets livid, and death easily results. Death may come from the exhaustion of prolonged fever and continuous struggle for breath. The heart does not always stand well the severe strain due to difficulties of respiration. Restless delirium, convulsions, coma and death in a few days.

The disease is always serious, and more so the younger the patient and the greater the amount of consolidation. Invasion of successive portions of lung is so common, that what may at first appear a very mild case, may very soon become a serious and fatal one. Temperature of 105°, if long maintained, is not favorable ; very fatal when following measles and whooping-cough. Lowered temperature, lividity of countenance, cool moist skin during collapse, are not good symptoms. A vigorous child will sometimes pull through a severe attack ; while a delicate, rickety, scrofulous child will succumb in a mild case. Diarrhœa, inability to take nourishment, stupor, weak, irregular pulse, are bad symptoms. Ability to cough secretion above glottis, is favorable. In old people and those very ill from any disease, inspiratory pneumonia is very fatal.

Good nursing and proper care of children would prevent many a case of broncho-pneumonia. No case of simple bronchitis, or any catarrhal affection, should be allowed to run without proper treatment. The extraordinary carelessness in the care of children of the poorer classes, and even by those in better circumstances, makes it a wonder to me that this disease is not more common and fatal. Kind Providence has certainly given their little bodies wonderful powers of resistance. Cleansing the mouth, throat, teeth, lips, etc., during very prolonged and severe illness, with some pleasant disinfectant, as boric acid and glycerine and water, might prevent many a fatal case.

When recovery does take place, it is slow, and convalescence is prolonged. Absorption of inflammatory products takes much time.

Favorable symptoms are lessened cough, less frequent respiration. Pulse usually keeps pretty rapid, even after temperature goes down. When disease follows measles, its duration is usually shorter, either to recovery or death.

The prevalence of influenza makes broncho-pneumonia more common at all ages. Emphysema and disease of heart give a condition in which broncho-pneumonia can readily step in to end the scene.

In diagnosis, it is often impossible to distinguish this affection from simple bronchitis, in the earlier stages ; but, usually, symptoms are too severe. Urgent dyspnœa and pulmonary distress are too great for bronchitis. Incessant cough, rapid pulse, high temperature, and frequency of respirations, aid the diagnosis very much, before consolidation comes on.

In severe cases before physical signs occur the diagnosis is between broncho-pneumonia and lobar pneumonia. Here age will aid, as broncho-pneumonia is mostly before fifth year, and lobar pneumonia after that age. The older the child the easier the diagnosis. Mode of onset is quite different. This disease begins insidiously, very often after a simple bronchitis has existed for a few days or measles whooping-cough, or influenza has been the trouble. lobar pneumonia begins abruptly, attacking the patient while in good health. Temperature has a similar mode of onset quite gradual in the one, and in the other reaching 104° or 105° in just 24 hours—may get as high in broncho-pneumonia,

but takes more time, and is more irregular. Respirations are more labored and paroxysms of dyspnœa more common in broncho-pneumonia.

When physical signs become developed and disease more advanced lobar pneumonia will be found a one-sided disease, while broncho-pneumonia is bilateral, evidences of consolidation being found in both lungs. Consolidation in lobar pneumonia is in one side, and is considerable in amount and easily found. Amount of consolidation in broncho-pneumonia varies greatly, sometimes in scattered patches, or so centrally placed as to be undiscoverable, or in large areas resembling lobar pneumonia. It is usually symmetrical, and affects chiefly posterior margins of both lower lobe and lower margin of middle lobe of right lung. Consolidation may be most evident along each side of spine. Different portions of lung may be in different stages of the disease at the same time. Lobar pneumonia terminates quite suddenly in seven or eight days, while broncho-pneumonia has a much more gradual ending, and the disease is much more prolonged.

But little can be learned by ausculation or percussion in early stages. Dry râles in one apex may point to lobar pneumonia. Moist râles heard all over back may be heard in both diseases, but as the case advances consolidation in one lung points to diagnosis. In broncho-pneumonia evidences of consolidation in both lungs may be made out, but not so early ; comes on slower.

Râles of all sorts and sizes are heard early in broncho-pneumonia, but later persistent sub-crepitant râles in one or more spots. To say whether the case is of simple or tuberculous origin is often very difficult, and in many cases impossible. A very lasting case looks suspicious. Family history may aid. If the disease is in the apex or central parts of the lung, with evidence of softening, it points to tubercle. In the vomited matter pieces may be picked out for examination. Tubercle cases are probably more common than we are aware of.

Treatment.—The great fatality and frequency of cases of this disease render the treatment of much consequence, and tries to the utmost the skill and patience of the physician. An unfavorable prognosis should always be given. It so often occurs that those you think will get well, and who are going along nicely, get a sudden extension of inflammation, collapse and death follow rapidly. It also fortunately happens that apparently hopeless cases get well. However desperate the case seems to be, hope should be entertained, and the case fought out vigorously. A comfortable, well-ventilated room, free from dust and noise, and containing a grate fire ; cleanly surroundings ; equable temperature, 65° to 70°, free from draughts. Air in the room should be kept thoroughly moist by using a bronchitis kettle, in the water of which should be placed bicarbonate of soda, and later this should be changed to Friar's balsam and spt. turpentine. If the room be large a tent should be placed about the child, so that the air could be kept sufficiently moist. Locally a light jacket-poultice of flaxseed meal with a little mustard sprinkled over the face of it to keep the skin a little red. When lightly made and kept snugly applied, good seems to result, and the little sufferer becomes more comfortable and breathes easier. I would not continue poultices longer than 24 or 48 hours, and would then use a jacket of cotton batting made to fit and kept snugly to skin, and to cover whole chest. Intelligent nursing and many little attentions will add to child's comfort. A cup of cold water constantly at hand, and frequent little sips are grateful and beneficial. Keep lips, teeth, etc., clean and moist. Daily sponging without exposure or disturbance. Disease is sure to be somewhat prolonged, and the child's strength and endurance will be most severely tried, hence, feeding and thorough support must be carefully looked after. Food should be given regularly at stated intervals, and as digestible and as nourishing as possible. Milk stands first while it agrees. Egg albumen dissolved in water with sugar and brandy is very good. Beef juice is valuable here. Broths and soups often do well. These foods may be varied or mixed and those given which agree best. May be given by the rectum at any time stomach seems irritable, and stimulants may be added if needed. Brandy to be given as case requires, and may be needed from the first, and often in heroic doses before the case is over.

At first if there is constipation and coated tongue, repeated small doses of calomel and soda are indicated till bowels are well moved, and if the child is feeble may aid by an enema. Keep bowels regular by enemata or small doses of

calomel. If there is diarrhœa, I would use bismuth and Dover's powder. An important point to aim at just here is to give something to lessen the viscidity of the mucus, and thus aid its expulsion. Ipecac will do this better than any other drug we have, given in small repeated doses well this side of nausea. Benzoate of soda stands close to ipecac, and has served me well frequently. Warm spray, containing soda, glycerine and carbolic acid made to play before child's face, so as to be freely inhaled, will aid decidedly in liquifying and getting rid of this mucous. Occasional drinks of warm milk, soda, and brandy will assist in the same way. To modify this constant cough, pain and restlessness, opium is indicated, and in proper doses is safe and useful. Much caution must be used that it does not interfere with expectoration. Elimination by the kidneys is needed, and for this I would give pot. cit. and spt. ammon. aromat. This will constitute a good mixture, made pleasant, and given every three hours. If the case is very sthenic and not very young, a few doses of aconite in spt. Mindereous would lessen arterial tension and heat very well. Any feebleness of pulse to be promptly met by brandy. Under these measures the disease may advance to a favorable ending with no further trouble.

You are not always so fortunate, however; increase of cough, more rapid breathing, much rattling in air tubes, color not so good, and more restless, all point to increase of obstruction. An emetic of ipecac to clear tubes, and more free stimulation are indicated, mustard to heart, ether or brandy or strychnine hypodermically. A more stimulating expectorant of ammonia, senega and strychnine may replace above mixture. Temperature, if very high, may be kept at a safe point by frequent cool sponging, fanning, change of position, light covering—place child in a bath of 100° and lower it 10 or 12 degrees. Quinine may be tried, but cool bath better, or applying cool damp clothes, or sprinkling cool water over body, and this last also induces deeper breathing, and aids vitality and lessens danger of collapse. These methods will need repeating under careful supervision for several days.

Some children bear heat better than others. A temperature of 102 or 103 in one child will produce a greater effect than 105 in another. Restlessness and delirium may need sedatives, as ammonia, ether, injections of chloral, quinine, musk. Must continue energetic support to obviate, if possible, tendency to respiratory failure, and strych. and tr. cinchona co. are valuable, hypodermics of ether, brandy, caffeine, cold or hot douches, mustard over heart. Go on while life lasts. Digitalis should be added to last mixture. When convalescence is established, syr. ferri. iod., and cod liver oil will do good. Give for a long time till health is quite restored. If spots of consolidation remain, may paint on tr. iodine; forced respirations, change of air are good. Be careful of cold and damp, and give plenty of time for recovery.

SURGERY

IN CHARGE OF

GEO. A. BINGHAM, M. B.,

Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children. 68 Isabella Street.

THE OBJECTS AND LIMITS OF OPERATION FOR CANCER.

In the Lettsomian Lectures for 1896, W. Watson Cheyne, of London, discusses operations in cancer, by which term he understands the carcinomata, the essential feature of which is continuous and excessive growth of epithelium. The primary object of operation in cancer is, of course, the prolongation of the patient's life and the alleviation of his local trouble, and Mr. Cheyne asserts that these results are in most cases best attained by aiming, wherever it is possible, at the cure of the disease. Until quite recently, and even now, many surgeons approach operation in these cases impressed with the view that real cure is practically hopeless, and that with few rare exceptions the most that can be expected is prolongation of life for a variable length of time. They, therefore, oppose elaborate and extensive operations which in themselves must involve considerable risk to life, and are content with fairly free removal of noticeable disease; in some cases, indeed, they do not even go so far. Mr. Cheyne, however, strongly urges the view that the first question to be kept before us in investigating a case of cancer, is, whether there is any possibility of curing the disease or not. Such a point of view makes a great difference in the operation, for it is not then sufficient to remove only noticeable disease, but it is necessary to take away as far as possible the parts in which disease may have become disseminated, although still unrecognizable,—in other words, possibly infected lymphatic areas. Thus, if the skin is affected, a considerable portion around must be taken away, and this is the more necessary where the infection of the skin has come from beneath,—as, for example, where cancers of the breast reach the surface,—for the dissemination in the cutaneous lymphatic plexus is often under these circumstances very rapid and extensive, and this is probably due in part to the larger size of the deep cutaneous plexus, which will, in the latter case, be first involved. Again, where muscle is infected, the cancer-cells are very rapidly and early driven along the lymphatic vessels of the muscle, and, even though there only may be one visible nodule in the muscle, the whole or the greater part of it must be looked on as suspicious and must be removed if there is to be anything like certainty in attaining the object of the operation,—namely, the patient's cure. Again, as regards the lymphatic glands, we know that from a very early period they become affected, and that, of course, without any visible enlargement in the first instance, and, in addition to this infection of the glands without enlargement, plugs of cancer-cells very often stick in the lymphatic vessels on their way to the glands. Hence it is necessary in all cases where the disease has lasted any time, or extended at all deeply, not only to remove the primary mass freely, but also to take away the whole lymphatic area up to and including the nearest lymphatic glands. Thus, the operation performed with the object of curing the disease becomes a much more extensive one, and consequently much more serious than that which simply aims at getting rid of the main trouble for a time and prolonging the patient's life.

The limits of the radical operation are where there is no reasonable prospect of removing the whole disease, or where, together with a very poor prospect of success, there is a very high mortality from the attempt. In such cases operation should not be considered at all.

But, even in cases where hope of cure or marked prolongation of life by a radical operation is out of the question, operation may sometimes be advisable with the object of removing symptoms which are immediately threatening to life,—such operations, for example, as tracheotomy, colotomy, etc.; or, in the second place, with the object of taking away the primary disease from a part, such as the mouth or throat, where its continued development means intense pain and trouble, and thus of substituting for these troubles an easier death from exhaustion. A *sine qua non* of such operations must, however, be that they are reasonably free from immediate risk; and, with regard to the second class, that there is a prospect of attaining the object of the operation,—namely, the entire removal of the disease from the part operated on. Mr. Cheyne does not think that a dangerous operation is allowable for simple relief of symptoms, however proper it may be, if a cure may be hoped for.

There are thus two different objects to be held

in view, and two different questions as regards operation which we must bear in mind in treating a case of cancer,—namely, (1) can we reasonably hope for a cure? for, if we can, a serious or dangerous operation is permissible; or (2) cure not being possible, can we decidedly ameliorate the patient's condition by operation, such operation, however, not involving any great risk of life?

As regards the limits of operation for cure in breast cancer, therefore, the author would exclude from operation (1) cases of cancer *en cuirasse;* (2) cases in which there is a large mass in the axilla involving the nerves; (3) cases in which large glands can be felt above the clavicle; (4) all cases in which secondary cancers already exist elsewhere.

In none of these instances is there any reasonable prospect of cure, and there will be but little to be gained by subjecting the patient to the elaborate operations to which he has referred. Short of these conditions, however, he thinks that the patient ought to have the chance of operation.

While the results of intervention are steadily improving, the proportion of cases which succumb to cancer is still considerable, and will not be much reduced till patients and doctors understand that there is a good chance of radical cure from early and thorough operation in mammary cancer, and that a suspicious lump in the breast, especially in elderly women, is not a thing to be watched, for over 90 per cent. of the swellings of the breast in elderly women are cancerous.

Mr. Cheyne gives the following statistics of breast operations by different surgeons:—

Operator.	Total Cases.	Mortality.	Known Recurrences or Deaths from Metastases.	Cures.	Cases Done More than Three Years Before the Report.				No. of Cases Cured.
					Total.	Mortality.	Recurrences, or Metastatic Deposits	Cures.	
		Per ct.	Per ct.	Per ct.		Per ct.	Per ct	Per ct.	
Fischer, Henry	147	20	55	8	86	22	59	15	13
Esmarch, Oldecop	229	10	44	10	171	13	(?)	14	25
Before 1863	.....	.....	.....	.....	47	.....	.....	4	2
After 1863	.....	.....	.....	.....	124	.....	.....	18	23
Rose, Fischer	61	26.3	(?)	6	.....	.....	.....	.....	4
Billroth, Winiwarter	143	23 7	62	5	89	22	68	9	8
Trendelenburg, Neuendorff	97	11	54	2	50	12	68	4	2
Lücke, Dietrich	110	7.6	(?)	9	69	8	60	13	9
Czerny, Schmidt	150	4.4	(?)	5	82	6	46	8.5	8
Kronlein, Horner	144	4	58	18	121	4	68	20	25
Küster, Schmidt	222	10.8	(?)	9	132	14	(?)	15	20
Konig, Hildebrand	135	.....	.....	17	118	9	61	20	23
Bergmann, Eichel	114	4.3	62	11	43	7	62	30	13
Mitchell Banks	82	12	26.8	21.9	.....	.....	.....	.....	18
Halsted	50	.....	43	4 or 8	11	.....	54	18 or 36	2 or 4
Watson Cheyne	61	1.6	31	19.9	21	.....	42.8	57	12

Contrary to the usual dictum, it is now found that the most favorable of all cases for operation are those of atrophic scirrhus, and the more nearly a cancer approaches the atrophic form the greater is the chance of permanent cure. Cheyne believes that the malignancy of the cancer in the individual cases has a great deal to do with the favorable result of operation, more than the early period of the operation; but that, expressed in other terms, is only to say that in the less malignant forms of cancer the disease does not diffuse itself as rapidly or widely, and that by an extensive operation we have a better chance of getting beyond it. A patient with a small tumor which has been noticed for several months, which has not markedly increased in size, and in connection with which there are only small glands in the axilla, has a much better chance than one who has found a tumor quite recently which is noticeably enlarging, and in which the axillary glands are of considerabe size. In the former case the probability of getting beyond the disease is great on account of its slow spread; in the latter the reverse is the case. Hence, while the sooner a cancer of the breast is radically removed the better, one cannot say that the chance of cure is necessarily proportionate to the early period of the operation; in any case, however, the chance of cure of necessity depends on the thoroughness of the operation.—*Brit. Med. Jour.*

SURGICAL TREATMENT OF HARELIP AND CLEFT PALATE IN CHILDREN.

In a paper on this subject, read before the N. Y. Academy of Medicine, Dr. D. H. Goodwillie says: Harelip is the result of imperfect intrauterine development. The upper lip is developed from a central and two lateral points. When these points fail of union a fissure results. The fissure may be on one side or on both; it is rarely in the centre. It may be accompanied by fissure of the hard and soft palate. In correcting the deformity the bone lesion must be operated upon as early after the birth of the child as its condition and the circumstances will permit, and before ossification takes place to prevent moving the bones into normal position. He had operated as early as the twelfth hour after birth. This first important step in correcting the deformity is accomplished by mechanically forcing the maxillary and nasal bones into normal position and closing the harelip and soft palate. Before entering into the details of the operation, the author described the orbicularis oris and the muscles inserted into it and running out in various directions, particularly those in the upper lip. There was less change in these antagonistic muscles in infants than in adults showing harelip.

The bony framework having been restored, the further operation of closing the lip became not only simplified, but the result was better. It was his custom to follow the one step immediately by the other. Every divided fibre of the orbicularis oris must be joined to its fellow in order to restore its normal action and the force of the levator muscles inserted into it. This could be best accomplished by union in the centre of the lip, whether in single or double cleft, and he made his incisions accordingly by the removal of V-shaped pieces. He used special plates for holding the fibres of the orbicularis on both sides evenly, and inserted a pin through the soft parts down into the bone outward from the nose on each side, in order to prevent action of the antagonistic muscles inserted into the orbicularis. The mucous membrane and skin of the lip wound were united by catgut. The retaining-plates and pins held the parts until union had taken place. The wound was sealed with antiseptic collodion or rubber tissue. If the bone and soft tissue were not supported during union, some of the fibres of the orbicularis might give way and cause deformity.

In bad cases there was pouting out of the under lip. His method was to take out a section of the pouting mucous and submucous tissue down to the orbicularis and close the wound with catgut. In order to remove a symmetrical section, he used a lip-gauge of his own devising.

After pointing out different varieties of cleft hard palate, he said all bone should be preserved, sacrificing only enough to freshen the edges when closing the parts. The operation should be done before the second month. When the lip alone was involved, it should be done before the child began to speak, or at two years of age. In fissure of soft and hard palate the judgment of the surgeon would decide whether to close the former first or do both at one sitting. In his experience little cutting was required if one began soon after birth to stretch the muscle toward the septum from both sides. The child should be in good condition and the tissues should have thickness in order to secure success. Nasal deformity might also exist and should receive attention. The septum might be absent; there might be hypertrophy of turbinated bones, even to the occlusion of the nares. In the further description of his mode of operating in different classes of cases, Dr. Goodwillie showed an instrument which served the double purpose of a tongue depressor and of a tube for administering chloroform. The spray of the anæsthetic playing from the upper surface of the depressor came directly in contact with the parts to be anæsthetized.

Dr. Robert Abbe opened the discussion. No other operation so taxed the ingenuity of the surgeon as those upon the mouth and lips of infants. The beginner often had bad results by reason of his rashness. While he could see some advantage in certain of the instruments, he thought there was a greater display than was demanded in most cases. The method advised, of making a double harelip of a single one, cutting some of the lip away on the sound side in order to bring the two together to make a central scar, seemed to the speaker not at all necessnry. Regarding fixing the lips by the plates, he asked if they did not leave a tender scar. He had found that any form of pin or suture transfixing the lip would produce a tender scar if left in longer than three or four days. This was fully as long as he left two in, one placed at each labio-nasal fold and fastened taut by adhesive plaster at the zygoma, the purpose being to maintain the broad muscular edges during primary union. In fissure of the hard palate, in some infants much could be done toward modelling the jaw. The fingers would often succeed without instruments. He had once thought that palate operations ought not to be done; that the defect should be filled with a plate fitted by a dentist. But such an apparatus was troublesome and expensive, and he had come to favor making repair by operation. Venous hæmorrhage could be controlled by pressure. He made no effort to avoid dividing the palatine artery, as it would be likely to be cut anyway while separating the soft parts. The earlier one operated the better. He had obtained an excel-

lent result in one case two days after birth. The soft parts tended to model the hard parts, hence the lip operation ought to be done early.—*Med. Rec.*

TALIPES VARUS.

BY DANIEL LAFERTE, M.D., DETROIT, MICH.

The great diversity of opinion entertained among surgeons concerning the proper method of handling cases of club-foot seems sufficient excuse for asking your attention for a few minutes to the consideration of some practical points connected with this subject. It is a subject that has been much discussed, both as to its pathology and treatment.

The cause of the congenital variety, which in nine cases out of ten is of the varo-equinus type, is probably the forcible contracture of the muscular walls of the uterus upon the feet of the fœtus as it lies in the womb in its usual position of flexure of almost all the points of the body, the feet at the same time being rotated inward. The other varieties of talipes, especially valgus, are now rarely met with as congenital affections.

When we come to consider what shall be done for this class of cases, whether congenital or acquired, and at what time our treatment shall commence, and in what that treatment shall consist, we arrive at that point where there are many divergent views.

The majority seem to favor the plan of commencing the treatment immediately after the birth of the child, by manipulation and fixation, so that the various structures binding the foot in its vicious position may be the more easily stretched. Brilliant results are claimed to have been obtained by this early and persistent treatment. I have no doubt that such is the case in the hands of some surgeons, but it requires an enormous amount of time and patience on the part of the surgeon and relatives. It means at least several months of constant treatment and careful watching until the child arrives at that time of life when he begins to walk, and thereby we have the weight of the body to assist in keeping the foot in the corrected position. Even this may not be sufficient, and after carefully watching over our patient month after month and year after year, he returns to us with a relapse of his trouble.

In these relapsed cases it is not advisable to resort to any treatment short of an operation, dividing the several structures that offer resistance. If we still cling to the method that has been fashionable for so many years, those structures will be divided under the skin. In cases accompanied with much inversion of the foot it is advisable to cut the tendons of the anterior tibial, posterior tibial, and long flexor of the toes, leaving the tendo-Achillis intact, as it will assist in steadying the foot in the efforts at bringing it around in a straight line with the leg. When this is accomplished the tendo-Achillis is severed, when the heel is usually readily brought down. When the deformity is not severe, as when there is not much concavity along the inner border of the foot, division of the tendo-Achillis alone will suffice to remedy the deformity.

This subcutaneous division of structure has not proven particularly successful in my hands. Too many of my cases have come back, perhaps, after several months with their deformity as bad as it was in the first place. Neither has the treatment by manipulation and passive motion, commenced immediately after birth and persisted in for some months after the foot had been brought around in a normal position, been attended with very flattering results. I have in mind now a case in which I commenced the treatment a few days after the birth of the child and kept it up persistently until the child was a year old when, the feet having been straight for several months, treatment was discontinued and the parents instructed to keep a close watch, and to report immediately if any tendency to relapse was noticed. They did as well as most parents do under similar circumstances, and brought the child back to me when the feet were as much deformed as they were in the first place.

That is only one of several cases which turned out similarly in my practice. I believe the skin on the inner border of the foot, the anterior portion of the internal ligament and the superior astragalo-scaphoid ligament have much to do in producing relapses. No matter how much they are stretched there is a great tendency to contraction.

Phelps undoubtedly recognized this fact when he advocated free division of all the opposing structures from the inner border of the foot in cases of varus. This is the operation that I have almost exclusively performed for the past four or five years, even in children immediately after birth, and I have yet to see the first case of disastrous results following its adoption. I am aware that it is recommended not to resort to this open operation in children under one year of age, but I look upon it as the only method worth considering when an operation is demanded. It is so easily performed, and accomplishes the object sought so thoroughly, with so little mutilation of the foot that it must be looked upon as a perfectly safe procedure.

Phelps' method is especially adapted to old relapsed or neglected cases. In those it is my belief that we can accomplish much more by this open method without any risk of evil consequences than we can by the subcutaneous division of the several tendons and resort to forcible traction by

means of appliances, which are liable to cause bruising and sloughing of the soft parts, or by resorting to excision of the astragalus or cuboid bones, or taking out a wedge-shaped piece of the tarsus from the outer border of the foot. By opening up the mediotarsal joint we accomplish in three months what it would take perhaps three years to achieve by any other method.

I have here a patient to show you, aged ten years, who was born with double talipes varus. The child, the mother tells us, was treated faithfully for his deformity by the family physician every day for a whole year and every other day during the next year. The plan pursued here was the usual one of manipulating with the hand and applying splints. He was still wearing braces when he applied for treatment at the Children's Free Hospital, presenting a severe form of varus as you see in this photograph which I show you. We operated upon this boy on February 23rd, 1895, by Phelps' method and discharged him May 4th, 1895, in the condition in which you see him now. No splints of any kind have been worn since the wound has been healed. He has been able to get along with a pair of ordinary shoes.—*Phy. and Surg.*

SURGICAL MORALS.—We borrow the above heading from an article by Dr. David W. Cheever in the *Boston Medical and Surgical Journal*, in which the author most felicitously treats of surgical responsibility and of the grave questions that are constantly arising in the surgical mind in regard to when to operate, and when not to, and when to stop and not to stop.

As regards responsibility, we may state that this is a factor inherent to all surgical work; it is ever present, and its effect upon the surgical mind depends upon the degree in which it is associated with other mental and moral processes. The average individual of no medical training is possessed of hard and fast notions in regard to the cold-bloodedness and indifference of the surgeon, and it were a waste of time to endeavor to dispel them, erroneous though they are. Long ago, the ideal surgeon was described as one "with a hand like a woman and a heart like a lion," and it has always been known that the truest form of courage is most frequently associated with gentleness and sympathy. As we have said, responsibility always exists. The moment we tender our services to a patient we are under contract to give him our best skill and knowledge, legally and morally, and our responsibility cannot for a moment be relaxed as long as our connection with the case lasts. We honestly believe that all members of our profession feel this responsibility, and act, in consequence, each according to his gifts. So-called callousness is often but the ability in a man to control his feelings, to keep cool in in the midst of excitement, and to allow his mind to work to the best advantage in favor of his patient.

As we have said, responsibility always exists. The moment our services are tendered to a patient we are under contract to give him our best skill and knowledge, both from the standpoint of morality and the law, and their application may not be relaxed for a moment as long as our connection with the case continues. Herein lies our responsibility, and it should leave our minds at rest as long as we are conscious of having assumed it in the right spirit.—*Internat. Jour of Surg.*

INTRA-PERITONEAL RUPTURE OF THE BLADDER.—Mr. Walsham (*Brit. Med. Journal*) has reported a case of rupture of the bladder in a man aged forty-two, treated by laparotomy and suture, with prompt recovery. The diagnosis was established by inflating the bladder with a few cubic ounces of air forced in by two or three compressions of the rubber ball of an ether-freezing microtome. As the introduction of gas into the abdominal cavity, even in small quantity, is attended by profound disturbance, the author advises that this test should not be employed until the patient is on the operating table, so that should collapse threaten the abdomen can be at once opened and the air allowed to escape. In the after treatment a catheter should not be left in the bladder because it is unnecessary, and because of the risk of cystitis and septic insection. Of the 28 published cases of intra-peritoneal rupture of the bladder treated by suture, 11 recovered and 17 died. In the cases that recovered, in only 1 was peritonitis present at the time of operation, while in 8 or 9 of those that died peritonitis had already set in. In 4 out of the 28 cases the bladder was found to leak at the post-mortem, and the author therefore strongly urges the importance of testing the competency of the bladder by injecting milk or other bland and easily detectable fluid.—*Internat. Jour. of Surg.*

TOUGH AND INTRACTABLE STRICTURES OF THE URETHRA.—Prof. Roswell Park (*Med. News*) describes a new expedient for dealing with this class of cases. He says: "I have recently had to deal with a long-recurring, exceedingly dense, and tough cicatricial contraction of the urethra, through which, after tedious effort, I succeeded in passing a filiform whalebone-bougie. Over this, as a guide, I endeavored to pass a variety of urethral instruments, but could coax nothing in the shape of a metallic instrument through the dense tissue. I then opened the deep urethra by perineal section, having the fine whalebone as a guide. Over the slightly bulbous extremity of this filiform bougie I tied, tightly, a piece of fine braided silk. Withdrawing this through the

urethra in a forward direction, I pulled through with it the silk, which I then proceeded to utilize as a fine chain-saw in the same way that Abbe has succeeded in attacking œsophageal strictures. With the fingers of one hand in the deep perineal opening, and with the other hand free outside, I could pull the silk backward and forward. Using it in this way as a very fine chain-saw, I succeeded in enlarging the canal. After repeated efforts the stricture was divided to a degree permitting a threading of the silk through the eye of a tunnelled urethrotome, which was at last pased down through the urethra, its blades separated, and the obstruction divided without further difficulty."—*Internat. Jour. Surg.*

Surgical Tuberculosis.—Dr. N. Senn, in the *Southern Practitioner* for January, publishes a clinical lecture from which the following will prove interesting: "The present tendency is to adopt more and more conservative measures in place of mutilating operations. It is no longer the man who can amputate a limb successfully and obtain satisfactory results that is entitled to distinction, but it is the humble worker in the science of surgery that interprets these pathological conditions correctly and subjects his patients to non-mutilating, conservative measures. It is the truth of this statement I wish to impress upon your minds strongly in connection with the treatment of tuberculosis of joints, and in this case I have shown you that this ominous fistula in all probability has decided the fate of the limb, if not that of the patient. The injection of ten per cent. iodoform glycerine emulsion every week or two in the treatment of uncomplicated joint tuberculosis yields the most happy results, because in such cases the iodoform exercises a specific anti-bacillary effect and at the same time constitutes what is invaluable in the treatment of such affections, a powerful tissue stimulant. Valuable as it is in cases of uncomplicated tubercular abscesses, such as I described to you in my preliminary remarks, it is useless in mixed infection with pus microbes. The uselessness of iodoform in the treatment and prevention of suppuration was demonstrated by the experiments made in 1800 by Rosving. He showed that pus microbes will grow luxuriantly upon nutrient media strongly impregnated with iodoform, and thus practically demonstrated that iodoform is not destructive to pus microbes, and we find his experiments and researches sadly corroborated by clinical experience in the treatment of tubercular joints, the seat of a secondary pyogenic infection."—*Am. Med. Review.*

Radical Cure of Hernia.—At the late meeting of the Medico-Chirurgical Faculty of Maryland, Dr. Walter B. Platt, of Baltimore, exhibited a boy, seven years old, upon whom he had operated for the radical cure of inguinal hernia by what appears to be an original procedure. He opened the inguinal canal in the usual way, reduced the hernia, and then took a small piece of sponge, washed it thoroughly, and by boiling made it thoroughly aseptic and put it in the conjoined ring and sewed it in there with the idea of keeping the hernia in place and having the sponge organized. It is not possible to speak of a cure, as it has been done only three months; but so far the boy can run about and play, the hernia stays up, and the sponge has caused no disturbance, so it must be organized by this time. Macewen says that only about forty per cent. of the cases operated on in the usual way are cured after two and a half years. If his case turns out well he shall treat all other children with the same kind of hernia in the same way.—*Maryland Med. Jour.*

Irrigation of Pus Joints.—Dr. Finney comments upon the uniformly unsatisfactory results of the old method of treating pyarthrosis, which was by aspiration or incision, followed always by the insertion of drainage tubes. The final result of that operation was, in the most favorable cases, a stiff knee. In many there was a resection of the joint later, and in a large proportion of cases an amputation of the leg. In a case treated at Johns Hopkins Hospital, a different plan was followed, at the suggestion of Dr. Halstead, with much success. The operation was after applying a tourniquet to the thigh, to make a long incision into the joint on either side of the patella, through which the joint was irrigated with several gallons of 1 to 1,000 bi-chloride solution. Then the tourniquet was removed, the wounds covered with protective, and treated in the ordinary way. There is little to be seen now except two parallel granulating wounds. The patient has been recently anæsthetized and the fibrous adhesions which had formed broken up.—*Jour. Am. Med. Assoc.*

The curette in the course of acute gonorrhœa is one of the surest means of causing extension to the tubes and ovaries. The mucosa, acting as a barrier against microbic infection, having been destroyed, entrance of specific pus from the vagina sets up uterine gonorrhœa of aggravated type, and the parametrium is liable to invasion through open and damaged lymphatics. Enforce rest. Leave the uterine cavity alone. Swab vagina and cervix with a one-per-cent. silver solution once or twice per week. Inject a 1 to 1,000 sublimate solution twice daily.—Auvard, *Arch. de Tocol.*

Dr. Welch reports a case of ataxic speech, *Med. News*, following the exhibition of large doses trional. Recovery took place on the withdrawal of the drug.

SURGICAL ITEMS.

I would emphasize that in every case of carcinoma it is necessary not only to extirpate the primary focus and the infected lymphatic glands, but also the communicating lymphatics, together with the surrounding tissues. This should be done thoroughly and systematically.—*Rydygier.*

For fissure of the anus Mr. Cripps advises a soothing ointment of six grains of morphine to the ounce of unguentum petrolii, applied five minutes previous to stool, and an astringent ointment, as sulphate of iron, ten grains to the ounce of ointment, or tannic acid, twenty grains to the ounce after the stool. Another good ointment is ten grains of camphor or fifteen drops of carbolic acid to the ounce.

Splenopexy is yet of too recent date to permit of passing a final judgment upon its value; but it is to be expected that, just as nephropexy has taken the place of nephrectomy in the treatment of floating kidney, splenopexy is destined to replace splenectomy in the treatment of movable spleen. It is obvious that splenopexy must necessarily be less grave in respect of its immediate consequences than splenectomy, while it presents the advantage of preserving an organ, the usefulness of which to the patient is unquestionable.—*Heydenreich.*

When, as in an amputation at or near the ankle joint, a rubber tourniquet is applied to the thigh, care should be taken to use a wide rubber band and not a rubber tube, since the accumulative pressure of the rubber tubing is sometimes great enough to injure the nerve. In high amputations, near the shoulder or hip, this objection does not prevail, since pressure on a nerve is immaterial at that point.—*Wyeth.*

My experience with the diagnosis of ectopic pregnancy before operation very distinctly contradicts the assertion which Tait made some years ago; that this diagnosis can never be made until after the abdominal cavity is opened. I can prove by the records and by my assistants that with scarcely an exception I made the probable diagnosis with sufficient assurance to warrant me in sending out the invitation cards to the operation so printed.—*Mundé.*

Powder for the Treatment of Genital Herpes.—Dr. E. Gaucher:

℞—Powdered alum, . . }
Powdered starch, . . } āā 10 grammes.

Mix.—For external use.

The balano-præputial region is dusted over with this powder. Recovery is usually promptly obtained.

I know of no operation which more requires the qualities and qualifications of a good surgeon than does thyroidectomy. No oozing or little pools of blood should obscure the tissues. It is absolutely esential to see and feel all the structures encountered, so that hæmostasis must be absolute, to insure the safe performance of the operation. When half or two-thirds of a goitre is removed a certain amount of atrophy takes place in the portion left. This was noticed in at least four of my cases, one of them being still in the Charity Hospital.—*A. H. Ferguson.*

Syphilis seems to have a very blighting influence upon the vitality of skin grafts, and because of this fact skin grafting cannot with confidence be recommended in the ulcerations produced by that disease. The possibility of inoculating persons with syphilis should be borne in mind when the grafts are taken from one person and engrafted upon another. Instances are on record where syphilis has been produced in this way, and therefore it is wise, whenever possible, to take the grafts from some part of the patient's own body.—*J. C. Oliver.*

The treatment for acute urethritis employed by Dr. R. Turner at the Seaman's Dispensary, Liverpool, consists of an alvine pill, 1 gr. at night, and the application of dilute nitrate of mecury ointment containing morphine 1 gr. to the ounce. A lucifer match with a fine layer of cotton wool twisted around it is smeared with the ointment and passed into the urethra three or four times a day. This causes no smarting, and in about eight or ten days the discharge has almost disappeared. At the same time an alkaline mixture containing hyoscyamus is given. Should the case not be seen till later, say about three weeks, injections of liquor plumbi subacetatis ʒ j to ʒ vj. of chloroform-water do very well, along with small doses of an emulsion of copaiba balsam given by the mouth —

Treatment of Hæmorrhoids.—Professor Roux speaks highly of the following treatment of piles: Place patient in the lithotomy position, and introduce the two thumbs into the rectum. Then, making semi-circular movements, gradually separate them, until, by dilatation of the rectum, they come in contact with the ischium. When the piles are brought plainly into view, take a hypodermic syringe, filled with a fifty to eighty per cent. solution of carbolized glycerine, and inject two drops of the solution into each pile, holding the base of the pile, between the thumb and index finger, while the needle is entered near the anus and pushed to the base of the pile, not going directly through the mucous membrane. This is a precaution against bleeding, which is however, very slight. Professor Roux thinks the good results are due rather to the dilatation than to the injections.—*L'Union Médicale.*

MEDICINE

IN CHARGE OF

N. A. POWELL, M. D.,

Professor of Medical Jurisprudence, Trinity Medical College;
Surgeon Out-door Department Toronto General Hospital; Professor of Principles and Practice of Surgery, Ontario Medical College for Women. 167 College Street.

PRACTICAL AIDS IN THE DIAGNOSIS OF PERICARDIAL EFFUSION, IN CONNECTION WITH THE QUESTION AS TO SURGICAL TREATMENT.

BY WILLIAM EWART, M.D. LONDON, ENG.

Some years ago, when honoured by a junior colleague with a request to examine one of his patients as to the existence of pericardial effusion or of a cardiac dilatation, I happened to diagnose the case correctly; but on how insecure a ground my opinion was based I have since then realized. I can also bring to mind a painful instance—probably not unparalleled in the experience of others—in which I failed to perceive during the patient's life, though not from neglect of examination, the presence of a large effusion which should have been aspirated. This early mistake led me to work out gradually a more complete method of physical examination, which I trust others may find of as much advantage as it has been to myself.

The elements of the method are (1) accurate percussion and palpation, (2) careful auscultation, and (3) observation of the pulse. All the signs to be enumerated should be understood to apply to effusions sufficiently large to raise the question as to surgical interference. We cannot attempt to-day the more delicate diagnosis of slight and early effusion. Lastly, as our time is short, and our object a practical one, I must reserve all theoretical considerations, and put before you the facts with as little comment as possible.

I. Percussion and Palpation.

Pericardial distension taking place usually in all directions, vertically as well as transversely, the first requisite is a competent knowledge of the normal levels and lateral extensions of the præcordial dulness, a subject to which I have formerly given some attention.

(*a*) *The Normal Boundaries of the Total Cardiac Dulness and its Angles.*—The lower level of the healthy dulness is that of the junction of the xiphoid cartilage with the sternum: in other words the level of the infrasternal notch. It is identical with the "hepatic line" of dulness, or upper line of the absolute dulness of the liver (above which partial or modified hepatic dulness ranges as far as the "suprahepatic" line, dotted in Fig. 1). At the lower half of the præcordium

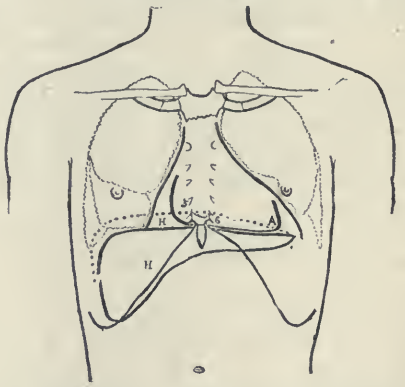


Fig. 1.—Illustrating "Rotch's sign" (dulness in the right 5th space—5 to H); also contrasting the angle, (on either side of H) of the dulness as due respectively to effusion and to dilatation The heart's outline is normal in size and position. The outer lines are those of the dulness in moderate effusions. The "suprahepatic line" (dotted) and the "hepatic line" limit the normal "modified" dulness of the liver; and H is placed on the absolute dulness.

the lateral boundaries of the anterior projection of the entire heart are situated respectively 1¼ or 1½ inch to the right of the sternal margin, on the right side; and on the left, just inside the nipple line. This interval comprises both the absolute cardiac dulness, which is usually small, and which also has definite normal boundaries and the total cardiac dulness. The normal *right lower angle:* Very careful percussion shows that the right boundary of the total dulness does not drop vertically on to the hepatic line. Its lower end is gently curved, and inclines inwards so as to terminate not far from the infrasternal notch; this is due in great measure to the convex shape of the right auricle, but it is also due to the resonance which arises from the overlapping lower angle of the right lung. The normal *left lower angle:* This, again, is usually rounded off, although corresponding to the angular projection of the heart's apex. As I have elsewhere pointed out, thanks to its contact with much pulmonary and with much

gastric resonance, the apex invariably becomes resonant also. We do not, therefore, find the normal apex beat within, but immediately outside, the outline of dulness, which is thus blunted or rounded off in a convexity towards the left. The upper level of the retrosternal cardiac dulness does not usually receive much attention. The line joining the lower edges of the third costal cartilages separates the præcordial dulness below from the prævascular dulness above; the latter being narrow and slight, needs care for its recognition.

(*b*) *The Normal Sternal Resonance.*—Although there is no lung tissue, but only the heart behind the lower half of the sternum, the latter is not dull, but more or less resonant. This is due to a strong conduction of resonance from the upper part of the bone, where this is in contact with the upper lobes of both lungs, and also from the right costal cartilages. Whenever this conducted resonance is lost we conclude that the sternum has ceased to be in contact above with the lungs. In health the absolute dulness of the heart is strictly limited towards the right by the left edge of the sternum, entirely owing to this bony resonance by conduction.

The order in which the following signs are given has not any reference to priority in time:

First Sign.

Considerable Extension of the Lateral Boundaries of the Total Area of Dulness.—In the diagram (Fig. 2), which shows the total pericardial dulness, the border of the lungs, depicted as they are often found, does not coincide with the lateral boundaries of the distended sac, but overlaps the latter. It is the superficial resonance of their fringes and the

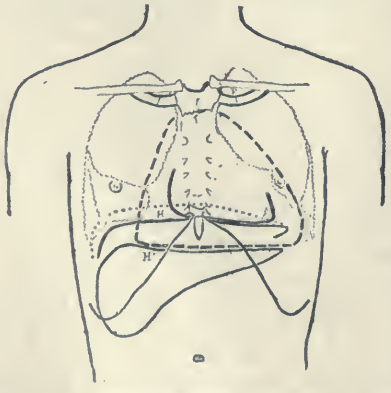


FIG. 2.—Outline of a large effusion, which the pulmonary fringes overlap, and of a total area of dulness. The liver is depressed from its normal level n (infrasternal notch) to the tip of the xhipoid. x shows the position of the finger for the "first rib sign."

puerile vesicular murmur arising from them which are so apt to mislead us at times into rejecting the idea of effusion. A careful percussion will guard us against this danger, and will enable us to delineate a complete outline of the sac.

Second Sign.

Great Extension of the Absolute Dulness; the Sternum Absolutely Dull.—The same diagram sufficiently illustrates this point also. It is seen that the two upper lobes are widely separated, and removed from all contact with the sternum. It should be noted that any retrosternal accumulation, whether of the solid or of the fluid kind, which will bring this about would likewise completely deprive the sternum of its normal resonance. A much enlarged heart (and particularly that form of hypertrophy and dilatation arising from pericardial adhesions), aneurysms, abscesses, mediastinal growths, etc., may bring about this change, which therefore, taken apart from all others, is not absolutely diagnostic, but is of great importance when taken in conjunction with them.

Third Sign.

The Depression of the Liver.—Any cardiac enlargement, and any considerable pulmonary distension will produce more or less displacement downwards of the hepatic line of absolute dulness, and enable us to feel more or less directly the epigastric pulsation of the heart; but in no other condition, except in pneumothorax and in intrathoracic sarcoma, is the hepatic depression so marked, at least in the middle line, as in large effusions. Instead of being found at the infrasternal notch, the hepatic percussion note begins at the level of the tip of the xiphoid, or even lower. As a result of this depression, the finger applied immediately below or at the side of the xiphoid can be made, by being pushed upwards and backwards, to ride over the upper surface of the liver, which normally is quite out of reach.

In another set of cases where pericardial dulness is much increased, namely, in obesity, the diaphragm is apt to rise instead of falling. If, therefore, any distinction were likely to be needed between the two clinical conditions, this point would be, practically speaking, diagnostic.

Fourth Sign.

Dr. Rotch's Sign: Dulness in the Right Fifth Intercartilaginous Space.—Some years ago Dr. Rotch published this valuable suggestion for the early diagnosis of effusion into the pericardium. The diagram (Fig. 1) will explain to you the meaning and the value of this sign. As a result of accumulation of fluid within the right corner of the sac, the usually resonant area in question becomes dull on percussion. Is this absolutely diagnostic? In other words, are there other possible sources for a dulness in this situation? In the *Glasgow Medical Journal* for April, 1894, Dr. George S. Middleton reports a remarkable case of

tricuspid stenosis, with enormous dilatation of the right auricle. The diagram which illustrates the case shows considerable width of dulness at the base of the thorax; the dulness extending 2 inches outside the right, and 2½ inches outside the left, nipple line, and rising to the second rib. This outline being almost identical with that of a large pericardial dulness, the question as to the possible existence of pericardial effusion was considered, but decided in the negative. In connection with the shape of the dulness depicted, especially that of its right lower corner, it is to be regretted that the illustration does not appear to be an actual tracing from the chest, but a diagram only. We are left in doubt whether the sternum was absolutely dull. But as regarded the right fifth intercartilaginous space near the sternum, it must be concluded from the diagram and from the *post-mortem* observations that that space was absolutely dull, owing to the retirement of the lung, just as it would have been dull as the result of effusion. Here, then, is a case in which Rotch's sign in itself could not have supplied the diagnostic verdict. We need something additional, and this need may I think be supplied.

Fifth Sign.

The Diagnosis Between Pericardial Effusion and Cardiac Dilatation: The Lower Angle of the Pericardial Dulness projects towards the Right.—Instead of the normal convexity of the right auricular border, which retires downwards and *inwards* towards the xiphoid, the outline of effusion is that of a bag of fluid spreading out at the base. As shown in the diagram, the lowermost level is also that of the greatest width of dulness from side to side, and the *lowermost angle projects outwards.* This prominent angular outline cannot belong to uncomplicated dilatation of the right heart, however large a size it may attain, owing to the fixation of the lower part of the right auricle to the orifice of the vena cava near the middle line. From the surgical standpoint the practical importance of this physical sign which seems to be the only one establishing a diagnosis between pericardial effusion and cardiac dilatation lies in the fact that aspiration of a dilated right auricle, mistaken for effusion, has been repeatedly recorded and has occurred more often than it has been published. For a skilled percussor the method presents no difficulties, but it entails a careful percussion of the entire length of the right border of dulness, and a faithful mapping out of its outline. Tracings of this can be taken directly from the chest, and these may prove to be of much value in connection with subsequent clinical events.

Sixth Sign.

The Left Lower Angle of Dulness. The Relation of the Apex Beat to this Angle.—Here again the pyramidal shape of the dulness gives towards the left, instead of the somewhat rounded-off outline which is normal, a prominent angle. This alone is very significant, but it is not an absolute guide, since any cause preventing the natural overlapping of the lung over the heart may give the same result. On the other hand, a determination of the relation of the heart's apex to the left angle of dulness is of great diagnostic value. In cases of cardiac enlargement or displacement to the left, howsoever brought about, the apex beats at the extreme left limit of the dulness and at its lowest level. This is not the case in pericardial effusion. The apex cannot be felt where there is much effusion; but it will be heard beating at a spot somewhat inside and above the boundaries of dulness. The small arrows in Fig. 3, draw attention to this striking and all-important relation.

Remarks on the Position of the Heart's Apex in Pericardial Effusion.—To the surgeon about to operate an accurate knowledge of the position of the heart and of its apex is of the first importance. Yet it may be doubted whether correct information is often possessed at the time when it is most needed. For this reason I cannot avoid warning you against a remarkable misconception hitherto perpetuated by the textbooks as to the alleged elevation of the apex within the pericardial effusion even as high as the third interspace.

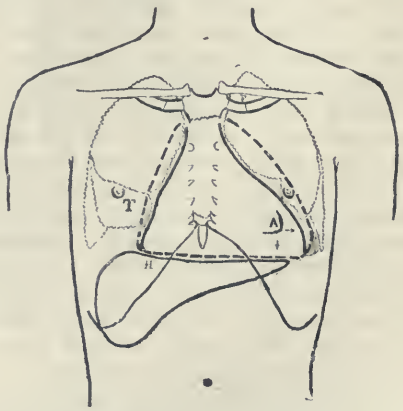


Fig. 3.—Outlines of the total and of the absolute areas of pericardial dulness. A, position of the cardiac apex (fifth space) in the effusion The dulness is shown by the arrows to extend far beyond and below A. The right auricle (not shown) descends with the diaphragm. T, the inframammary patch of tubular breathing.

That an impulse can usually be felt there is not surprising, since the antero-posterior diameter of the chest at that level (between sternum and spine) is not much greater than that of the heart itself, whilst the left lung no longer intervenes between the latter and the chest wall. The impulse is not, however, that of the apex of the

heart, but rather of its base. Whether the extraordinary mistake arose with Sibson, or was only handed down by him, I know not; still his authority probably had something to do with its long survival. In Fig. 3 the letter A is placed in the usual situation of the healthy beat; and at that spot you will find the apex at any necropsy on a case of uncomplicated pericardial effusion. And you will then note that whilst the heart has preserved its normal situation, the floor and the sides of the pericardium have receded from it.

The impossibility of the apex being raised as alleged to the third interspace by the operation of gravitation or of ordinary mechanics is almost self-evident. The vessel which I show you contains serum, or rather a fluid which my able former clinical clerk, Mr. J. L. Kirk, who is giving me his valuable assistance, has prepared of specific grauity 1018, which is, according to Professor Haliburton, the usual density of pericardial effusions. If we drop into it a heart, this will sink like lead. Were we to enclose some blood in a thin membranous bag and introduce the bag into the jar, this also would sink to the bottom. The heart, even in diastole, cannot therefore float in serum. Slight mechanical displacement might conceivably be brought about by one circumstance only—the lifting by the distended pericardial sac of the tracheal bifurcation and of the bronchi, and with them of the pulmonary veins and of the heart. Practically this rise is very inconsiderable, and moreover it does not directly influence the ventricle. On the other hand, we must remember that the heart is tethered to the bottom of the pericardium, by the attachment of the inferior vena cava to the foramen quadratum in the central tendon, and that the considerable descent of the diaphragm must depress the level of the right auricle and tend to depress the apex, far from allowing it to rise. I have in some cases detected a lowering of the heart's apex in pericardial effusion, and with it a more median position of the heart, which then tends to hang more vertically from the aortic arch, the latter becoming slightly straightened. This I have depicted diagrammatically in my book on *Cardiac Outlines*.

The Thoracic Signs.—It is impossible to attempt a complete account of all the physical signs; but before dismissing the subject of anterior percussion and palpation, reference may be made to the great resonance of the upper part of the chest, where the lung (as happens also in pleuritic effusion) is partly retracted, and to the extreme activity of upper costal respiration, making up for the loss of diaphragmatic breathing. The mechanical results of this upper costal hyperpnœa are easily foretold; they imply fulness of the upper portion of the chest, which, however, is not symmetrical, as we shall presently note.

Among the thoracic signs there are two claiming our attention: (1) the bulging of the left chest; (2) the altered relation between the left clavicle and the first rib. The bulging of the left chest is analogous to that observed in cardiac enlargement, only much greater. The left costo-cartilaginous arch is raised, and much restricted in its movements, and the fourth to sixth cartilages are more spaced than usual. The width of the fourth space is apt to be markedly increased, and the same is true of some of the upper spaces, partly in connection with the thoracic changes to be described.

SEVENTH SIGN.

The First Rib Sign.—In all cases of considerable pericardial effusion which I have examined for this sign, it was possible to feel with the finger the upper edge of the first rib as far as its sternal attachment (see F in Figs. 2 and 3). This points to a raising of the clavicle, not only in its outer but also in its inner portion; and to a relaxation of the ligament between it and the first rib. In the absence of pericardial effusion I have rarely seen this sign, except in some cases of considerable cardiac enlargement. I regard it as specially connected with the immobility and with the elevation of the lower ribs, coupled with the great activity of the superior respiratory region of the chest. The left clavicle is apparently lifted to a higher level than it is possible for the first rib to reach.

The raising of the first rib is not of the same order as that witnessed in emphysema. In the latter its elevation is permanent; clavicle and rib move up together and remain lifted; here, on the contrary, the first rib contributes in its limited range to expiratory as well as to inspiratory movement. Moreover, the spinal mechanism is not the same in the two affections. There is here no rounding of the shoulders. On looking at the chest the general impression is rather that it is bowed out towards the left, the spine being probably bowed likewise by the increased internal pressure, and as a result of the attitude assumed for the relief of respiration. This sign has the advantage of being easily studied without disturbing the patient, and constitutes a definite and useful addition to our clinical evidence of pericardial effusion.

Signs Derived by Percussion in the Back; the Normal Dorsal Percussion.—Although little attention has been given to this subject, it is in the back that the crucial signs are to be found upon which for some time past I have most relied in the diagnosis of pericardial effusion, and in particular that dulness which I venture for convenience to term the posterior pericardial patch of dulness. Here again, as in front, familiarity with the normal percussion is requisite. As I cannot on this occasion enter into much detail, let me

simply give you the assurance that the traditional statement that the lung extends posteriorly down to the tenth rib is a traditional error; the lung extends in health a great deal lower than this, and its resonance would be found by any of you on percussion to reach the upper border of the twelfth rib. This knowledge will enable you to appreciate the value of the following remarks.

Eighth Sign.

The Posterior Pericardial Patch of Dulness.—Whenever fluid is effused into the pericardium the normal resonance is modified at the left posterior base in a most definite way. A patch of marked dulness (shown in Fig. 4) is found at the left inner base, extending from the spine for varying distances outwards, usually not quite so far as the scapular (angle) line, and ceasing abruptly with a vertical outer boundary. Above, its extension is also variable, according to the size of the effusion; commonly it does not extend higher than the level of the ninth or tenth rib, and here again its horizontal boundary is abrupt. Its shape then is that of a square, and it is quite unlike that of any dulness arising from pleuritic effusion. You will not experience any difficulty in identifying the patch in question. Rather greater care in percussion is needed, however, to follow the dulness as it extends to the corresponding vertebræ, and for a short distance also to the right of them. For some time I overlooked this extension, which, owing to the general resonance of the right base, is one of partial dulness only. When, however, the effusion is considerable, the extension of the patch in the right chest may become almost absolutely dull.

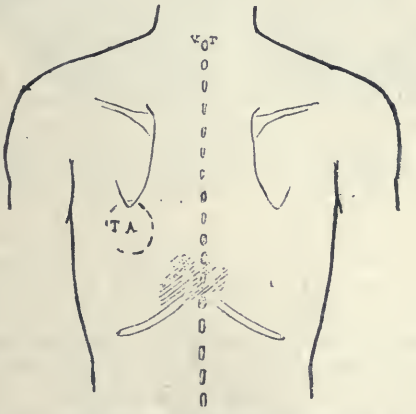


Fig. 4.—The "posterior pericardial patch of dulness" (shaded); and the "posterior pericardial patch of tubular breathing and ægophony."

I wish time permitted me to discuss with you the significance and the probable mechanism of production of this singular and most helpful sign. It is best I should confine myself on this occasion to practical points. The value of this sign is, that, unlike many others, it is very sharply defined, and does not fit any other diagnosis. When, in a doubtful case, all the signs observed in front support the diagnosis of effusion, and this sign is also found, we have then in hand complete and crucial evidence of the existence of fluid; whilst when, as sometimes occurs, previous adhesion of the anterior surface of the heart to the chest wall renders diagnosis extremely difficult, and help is invaluable, and its place, so far as I am aware, cannot be supplied by any other available diagnostic method.

Signs derived by Ascultation in Front and Behind.—To the auscultatory signs we can only devote very cursory remarks. Anteriorly the first feature is the hypernœa, and the puerile breathing heard over the upper lobes; and, in severe or protracted cases, the catarrh set up within them, which tends to produce their further inflation, and to attenuate over a greater surface the dulness due to the distended sac.

Ninth Sign.

Tubular Breathing Below the Right Mamma.—Although not constant, this sign, which does not appear to have been noticed, should be looked for in severe cases. At the anterior base (see T in Fig. 3), usually in the nipple line, and a little above the hepatic line, distinct tubular breathing is audible, which is sometimes restricted to expiration. Its localization is due, I venture to think, to to active respiratory draught kept up by the movements of the upper lobe at the origin of the bronchus for the middle lobe, coupled with the compression of the latter in the situation named, laterally by the base of the pyramidal collection of fluid, and above by the freely expanded upper lobe, often also by a superadded pleural effusion.

It is at the back that the most characteristic signs are to be heard. On auscultating the dull patch to the left of the spine respiratory sounds are found to be absent, and the voice sounds feeble.

Tenth Sign.

The Posterior Pericardial Patch of Tubular Breathing and Ægophony.—Immediately below or slightly to the left of the tip of the left scapula a patch about 2 inches in diameter presents well-marked tubular breathing and agophony (sec. T, Æ in Fig. 4.) This sign, although not so important as that of the patch of dulness, is very commonly, if not always found, in cases of considerable effusion, and gives valuable confirmation to other signs. It has been described by other observers. The mechanism of its production is analogous to that suggested above, and is doubtless connected with pressure on the bronchi descending to that district, and with partial collapse of the pnemonary tissues. It also occurs in pleural effusions.

ELEVENTH SIGN.

The Secondary Pleural Effusions.—Pleuritic effusion is among the most common complications of severe pericardial effusion, and is probably to be regarded as induced mechanically by pressure. If it should be limited to the right side, an opportunity would be given of contrasting the outline and situation of the pericardial patch of dulness with those of the dulness peculiar to pleural effusions. Its occurrence belongs to the later rather than the earlier stages, and therefore its diagnostic value is practically less.

The Pulse in Pericardial Effusion.—You are all familiar with the classical description of the *Pulsus cum inspiratione intermittens.* This is an important sign. I have occasionally observed it in pyopericardium; but it is characteristic of mediastinal rather than of pericardial disease, and it cannot be regarded as diagnostic of the latter.

TWELFTH SIGN.

The Large and Slapping Pulse of Pericardial Effusion.—I have frequently observed in cases of pericardial effusion an opposite condition of the pulse. Attention has not been pointedly directed to it; but, strange to say, it is incidentally mentioned in the light of a tactile hallucination in Marey's book on *La Circulation du Sang*, where a sphygmogram is given to show that the pulse is really small. Marey instances this as an example of the "illusions of touch." I cannot share in his view of the facts. The sphygmograph seems to me to be at fault, not the finger. The peculiarity of the pulse is its great size and velocity of impact, and the sudden collapse of the wave. In fact, it is Corrigan's pulse, almost of a typical kind, though never so extreme as in well-marked aortic regurgitation. Its occurrence under the circumstances of effusion may throw an interesting side-light on the mechanism of its production in aortic valvular disease. Time, however, forbids our discussing the suggestions which might be offered towards an explanation of its mode of origin in the affection we are studying.

CONCLUDING REMARKS.

In this important sketch I have not dwelt upon various familiar but valuable signs, such as friction sounds and fremitus, nor on the symptoms of pain, alteration of respiration, position in bed, etc. My endeavor has been to add to your supply of available signs some which are novel and others which are not commonly described, such as might in conjunction with the old ones facilitate your diagnosis of any case. A full presentation of the clinical subjects of pericardial effusion would be a much longer task than we could deal with at this short meeting.

Turning now to the practical application of the method, I believe that the confidence of the surgeon in operating upon any given case will be increased by a knowledge that all the typical signs pointing to a normal effusion have been obtained.

The most difficult and anxious part of our subject is, however, one to which I have not yet alluded. In practice we must always be prepared to find a wide difference between the classical account of a disease and our patient's individual case. Pericarditis is no exception; and the irregular case presents special importance for the surgeon. The fact is that effusion may supervene, either after a previous attack which has left the heart adherent to some part of the sac, or after an early fibrinous stage more than usually agglutinative, leading to soft adhesions—perhaps likewise limited to one side—and to a partial filling of the sac with heavy gelatinous masses of fibrin. To such cases the ordinary rules as to the position of the heart do not apply, and it becomes our duty to work out for ourselves the special conditions of each case. This is often a very difficult task; still we must not despair of its accomplishment, but on the contrary, regard it as our duty to spare no trouble till it is attained. At any rate, the surgeon whom we may call in to operate will expect us to satisfy him as to the position of the cardiac apex, and to give definite reasons for our view as to the relative position of the heart and of the bulk of the fluid.

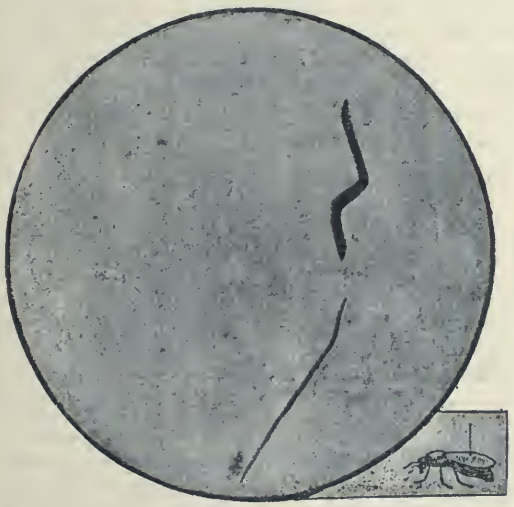
In dealing with difficult cases of this kind we shall appreciate the value of the systematic study which we may have devoted to the typical normal cases, as supplying a definite starting point for our investigation, and a standard with which we may gauge the extent of the irregularity peculiar to any given case. Bearing in mind the relative safety of the operation for using the pleura, and even the pericardium, by incision, it behoves us to endeavor by every means within our reach to render equally safe as regards the heart, and as satisfactory as possible for the efficient relief of the effusion, the apparently more simple but decidedly more uncertain operation of aspiration.—*Brit. Med. Jour.*

MOSQUITOES AND MALARIA.

The mosquito, if we are to credit the results of recent researches, has more to do with malaria than any one has hitherto imagined. In many cases it seems to be the means by which the malaria parasite escapes from the body of one victim and attains its full development preparatory to attacking that of another. We quote from *The Lancet* (London, March 21) portions of the second Goulstonian lecture, delivered before the Royal College of Physicians on this interesting subject, by Dr. Patrick Manson. He begins by stating

that of two forms of the malaria parasite, the one found within the human body provides for its propagation only outside the body, while the form found outside is able to propagate only inside. How then, he asks, does the parasite escape from the blood to the outer world, where alone it is able to develop into a form suitable for attacking another victim? It seems likely that this is accomplished by the blood-sucking insects, notably by the mosquito. It is certain that the mosquito is infested by the parasite, as shown in the accompanying picture. After detailing these facts, Dr. Manson continues as follows:

"I think I have advanced many cogent reasons for believing that the plasmodium malariæ on leaving man, and as a normal step in its life-history, becomes parasitic in the mosquito, and that in this insect it enters some cell—as any gregarine or coccidium would do—and probably develops into its reproductive sporulating form just as it does in the blood-corpuscles of man. What then? How can its spores get out of the mosquito so as to



SECTION OF A FILARIA IN THE STOMACH OF A MOSQUITO.

The darker object is the filaria; it has just escaped from its sheath, the more lightly shaded object below.

increase and multiply and preserve its species from extinction when in the course of nature the mosquito dies? How, too, does it spread over the land, and how does it get back to man again?

"Before attempting to answer these questions, I must first describe very briefly a passage in the life of the mosquito. The female mosquito, after she has filled herself with blood—the male insect is not a blood-sucker—seeks out some dark and sheltered spot near stagnant water. At the end of about six days she quits her shelter, and, alighting on the surface of the water, deposits her eggs thereon. She then dies, and as a rule falls into the water beside her eggs. The eggs float about for a time, and then in due course each gives birth to a tiny swimming larva. These larvæ, in virtue of a voracious appetite, grow apace, casting their skins several times to admit of growth. Later they pass into the nympha stage, during which, after a time, they float on the surface of the water. Finally, the shell of the nympha cracks along its dorsal surface and a young mosquito emerges. Standing as on a raft on the empty pelt the young mosquito floats on the surface of the water while its wings are drying and acquiring rigidity. When this is complete it flies away. The young mosquito larvæ, to satisfy their prodigious appetites, devour everything eatable they come across; and one of the first things they eat if they get the chance, is the dead body of their own parent, now soft and sodden from decomposition and long immersion. They even devour their own cast-off skins. In examining mosquito larvæ one often comes across specimens whose alimentary canals are stuffed with the scales, fragments of limbs and other remains of the parental insect.

"As we have seen that the mosquito larva devours its own and its neighbor's exuviæ, we can readily understand how, once gregarines have been introduced into a pool of water, the larval mosquitoes in that particular pool become infected by the parasite. But as the mature mosquito when she quits her nympha husk also contains numerous gregarines, we can also understand how she, too, carries the infection with her, scattering it about the country in her fæces or conveying it to another pool where she may lay her eggs and afterward die. Her body is then devoured by her progeny or by any other mosquito larvæ that already chance to be in the pool. Along with her body, of course, the larvæ swallow any gregarine germs it may contain if they have not already been picked up by the larvæ when feeding on the mud at the bottom of the pool. Does not this little story of the gregarine indicate the way, or a way, in which that other mosquito sporozoon—the plasmupium malariæ—multiplies? Does it not indicate how this parasite, in which man is so much interested, passes from mosquito to larva, from larva to mosquito, in never-ending series? Does it not indicate how the plasmodium disease of mosquitoes spreads from pool to pool and is scattered broadcast about the country, and does it not indicate how it may get back to man again?

"We can readily understand how the mosquito-bred plasmodium may be swallowed by man in water as so many disease germs are, and we can readily understand how it may be inhaled in dust. Mosquito-haunted pools dry up. The plasmodia in the larvæ, and those that have been scattered about in the water, finding themselves stranded by the drought, and so placed in a condition unfavorable for development, pass into a resting stage, just as they do when by quinine or other means

man is rendered temporarily unsuited for their active life. . . . The dried sediment of the pool, blown about by the winds and currents of air, is inhaled by man, and so the plasmodium may find its way back again to the host from whom its ancestors had, perhaps, started generations back. I would conjecture that on entering man and on entering the larval mosquito it develops into a flagellated spore similar to the flagellated spore into which it develops in the mosquito's stomach. In this it should be enabled to penetrate the mucous surfaces and get into the human blood-cell. Many mosquitoes die without getting to water; all male mosquitoes die without seeking water. They may die far from water, blown away, as we know mosquities are, by high winds. The bodies of such mosquitoes fall in time on soil and decompose. The parasites they contained pass into the resting stage, and in this form they also may be carried into the air by currents, or be blown about as dust, or be shaken out by man when he disturbs the soil. In this way the plasmodium may find a route back to man again. In this way, too, we may explain the occurrence of those cases of malaria which apparently, though not really, are unconnected with swamp or stagnant water. Such is my view of the life history of the malaria parasite, and the rôle of the mosquito with regard to it, and of the process by which man becomes infected."

This interesting discovery may bring a certain amount of consolation to the poor mortal racked by chills and fever, when he realizes that his arch enemy, the mosquito, is suffering even as he is; and, it is certainly encouraging to know that in fighting the mosquito we are also fighting the propagator and breeding-place of malaria. Systematic war on mosquitoes by killing their larvæ—for instance by spraying stagnant pools and marshes with crude petroleum—is now seen to be more necessary than ever, and when it has been persistently enough urged by scientific men, it will doubtless be carried on on a large scale.—*Literary Digest.*

When you meet an employé of Parke, Davis & Co., whether on the road or in the house, you meet an enthusiast. He does love to expatiate on the wonderful growth of "his" firm—the number of its laboratories, branch houses, agencies, and representatives; its twenty-nine distinct lines of pharmaceutical preparations and its six thousand different products. It reminds you of John Bright waxing eloquent in the House of Commons over his favorite theme—the prosperity of the United States.

But there is good ground for his enthusiasm and for marvel at the amazing success of this firm. Recently they have opened two new branch houses to satisfy the rapidly growing demand for their preparations—one at New Orleans and another at Baltimore.

The price list which Parke, Davis & Co. are now distributing, and which suggested these reflections, is an admirable catalogue in its completeness, convenience of arrangement, and wealth of miscellaneous information. By all means write the house for a copy.

And remember, too, that the products of this firm are so many weapons for your assistance in the perpetual, harrassing warfare with disease—weapons upon which you may rely through thick and thin, in emergencies as well as in routine practice. Their label on a bottle or box means that the contents have been prepared with the utmost skill, and with scrupulous deference to purity and activity.

The Cutaneous Irritation of Measles, Etc.—Balsam of Peru is a useful addition to many ointments, both on account of its pleasant odor and because it is in itself a valuable non-irritating antiseptic. When added to vaseline it is much more readily mixed if a few drops of alcohol or castor oil are added. The following may be recommended to allay the cutaneous irritation of measles, chicken-pox, etc;

℞—Lanolini puris, ... ℥ j.
Vaselini, ... ʒ iij.
Ol. ricini, ... ♏ iij.
Aq. dest., ... ʒ v.
Ft. ung.—Sig. Apply as required.

Preparations of vaseline or parolene can have a pleasant odor given to them by the addition of a few drops of oil of wintergreen.—*Practitioner.*

Elixir Salicylic Comp.—Wm. R. Warner & Co.'s Elixir Salicylic Comp. is at the present time, no doubt the foremost remedy for rheumatism, gout, lumbago and kindred diseases. In acute inflammatory rheumatism, two tablespoonsful every few hours, diminished to one tablespoonful every three hours produces desired effects. It is a pleasant and permanent remedy, and is put up in 12 oz. square blue bottles by Wm. R. Warner & Co. It is advisable to purchase Elixir Salicylic Comp. (Wm. R. Warner & Co.) in original packages to avoid substitution of inferior imitations.

Syphilitic Gummata of the Heart.—During a recent meeting of the Montreal Medico-Chirurgical Society, *Montreal Med. Jour.*, Vol. xxiv., p. 474, Dr. Finley presented the report of a case of syphilitic gummata of the heart and liver, and exhibited the pathological specimens showing the characteristic lesions.

OBSTETRICS AND GYNÆCOLOGY

IN CHARGE OF

J. ALGERNON TEMPLE, M.D., C.M., M.R.C.S., Eng.,

Professor of Obstetrics and Gynæcology, Trinity Medical College;
Gynæcologist Toronto General Hospital; Physician to the Burnside Lying-in Hospital.
205 Simcoe Street.

NEW POSTURAL METHOD OF TREATING PROLAPSUS OF THE UMBILICAL CORD.

BY A. BROTHERS, B.S., M.D., NEW YORK.

Prolapsus of the funis is a serious complication of labor, chiefly because of the increased dangers to the child. Hecker placed the infantile mortality at 37.6 per cent., Scanzoni and Churchill at 53 per cent., and Charpentier at 79 per cent. The writer studied the causes of death in 167 stillbirths from the records of the New York Bureau of Vital Statistics, and found that 28 per cent. were attributed to compression of the umbilical cord. We are justified in concluding, from the very lowest estimate, that in one-quarter of the cases in which this complication exists the child is lost.

The nature of the presentation, the shape of the pelvis, and the duration of the labor are modifying prognostic circumstances. The early discovery of the prolapsed cord before the rupture of the membranes offers a far better prognosis for the child than the case in which a considerable portion of the cord is found prolapsed after the waters have escaped. The greatest danger to the child is offered by the association of prolapsus with vertex presentation. According to Engelman's studies only 36 per cent. of such children survive. Presentations by the shoulder or breech offer a much better prognosis—50 per cent. living children. In primiparæ the infantile mortality is far greater than in multiparæ.

The postural treatment for this unfortunate complication was first suggested by Thomas. The woman being placed in the genupectoral position, the body of the uterus tends to sink lower than the cervix, and the replaced cord, owing to the same force of gravity, tends to slip down to the fundus and out of harm's way. The position, however, is an arduous one for a woman in labor, particularly if it is to be kept up for any length of time.

Over a year ago, while preparing the chapter on prolapse of the cord for the William F. Jenks Prize Essay, it occurred to me that the same result could be obtained in a far simpler manner and with less discomfort to the patient and attendant by raising the pelvis to a sufficient height with the woman on her back. At that time I wrote: "Theoretically the Trendelenburg position ought to be followed by the same result."

Since then two opportunities presented themselves for testing the efficacy of the method. As both children were saved in spite of the worst possible surroundings and absence of nearly all conveniences, I do not apologize for giving the histories. I merely trust that the method may be given a fair trial by those having larger fields for observation.

CASE I.—Mrs. R., æt. 33, mother of six children. Previous confinements usually easy. Present labor has lasted several hours under the care of a midwife, who has made the diagnosis of cross-birth. On my arrival in the dingy basement I found a large, flabby woman—probably weighing two hundred and fifty pounds—in labor on a cot-bed. On external palpation the fœtal head was readily felt to the right and the breech to the left. The fœtal heart sounds were rapid, but audible to the naked ear. On internal examination the os was found to be fully dilated and the membranes protruding but unruptured. The examining fingers failed to reach any presenting parts. An external version was readily effected by placing each hand at the opposite pole of the fœtus and rotating the child so as to get a breech presentation. Vaginal examination now revealed the membranes still unruptured, left foot presenting anteriorly, and, to the right, about six inches of pulsating umbilical cord. I now sent for Dr. M. Cisin, who gave chloroform. An ordinary cane chair was placed upside down at the foot of the bed and covered with a pillow and sheet. With considerable difficulty the very heavy woman was dragged up the incline on her back, so that the pelvis was several feet higher than her head. I now introduced my entire hand into the vagina, pushed the cord very easily into the uterine cavity, ruptured the membranes, and placed a new sponge against the late seat of the prolapsed cord. I next seized the pre-

senting foot and delivered it with a good portion of the breech. After some difficulty the second foot was brought down. As the child was presenting with its abdomen anteriorly—a threatening position for the child—I seized both feet and rotated the body of the child on its long axis, so as to get the dorsum anteriorly. The chair was now removed and the patient dropped to the level of the bed, so as to facilitate further manipulations. The shoulders and arms gave rise to considerable difficulty in their delivery, and the right humerus was fractured in the forcible efforts used. The head—using the Prague method—was readily extracted. After being born the child was found to be cyanotic and in a condition of suspended animation, although the pulsations of the cord were quite strong. Muscle tonus being distinctly present, the cord was quickly cut, allowing a little blood to escape from the fœtal end. A little shaking up, after clearing the throat of mucus with the finger, was sufficient to start respiration, and shortly afterward the child began to cry. The mother, in the meantime, was losing considerable blood from a partially detached placenta. Efforts at expression failing, I was obliged to resort to the manual removal of the placenta. After an intrauterine douche and a dose of ergot the mother was turned over to the midwife. The baby was found to weigh ten pounds. A plaster-of-Paris splint was applied to the broken humerus. Mother and child made an uneventful recovery.

There is no doubt in my mind but that the elevation of the pelvis in this case was entirely successful in keeping the prolapsed cord out of harm's way until delivery was completed, and was chiefly instrumental in saving the child's life. At least six inches of cord presented in advance of the child's foot. If left to nature the cord would have come down more and more as the child's body advanced. Compression would have taken place to such an extent as to have cost the child its life.

Case II.—Mrs. F., æt. 28, third confinement. Previous labors fairly easy. The midwife after being in attendance the entire day, went off for an hour. On her return she found the membranes ruptured and a large loop of the umbilical cord in the bed. On my arrival, about an hour later, I found about twelve inches of prolapsed cord in bed and a complete absence of labor pains; the cord pulsated one hundred and fifty times to the minute. On internal examination the os was found fully dilated; the right hand presented, and above this could be readily felt the face with the chin posterior. A hopeless prognosis as to the child was given. Immediate action was indicated in the interests of the child, so that anæsthetics and assistants were dispensed with. The foot-piece of the bed being about eighteen inches above the place of the bed proper, an incline was quickly made with a washboard and an ordinary piece of board. These were covered with a pillow and the woman drawn up the incline so that the pelvis was elevated. Seizing the cord with the hand, it was pushed back into the uterine cavity. The presenting hand and face were now pushed to one side and the foot drawn down. The cord again presented to a small extent and remained prolapsed during the remainder of the manipulations. The opposite foot was next delivered, then the shoulders, and finally the head. The entire manipulation did not exceed five minutes in duration. The child was born asphyxiated to the first degree, but the escape of a little blood from the divided fœtal end was sufficient to resuscitate it. Both mother and child were doing nicely on the following day.

The second case was not as perfectly successful as the first in the complete reduction of the cord. This I attribute to the long duration of the prolapsus (probably an hour and a-half), the considerable length of the cord prolapsed, the absence of a sponge to keep it in the background, and the absence of anæsthesia and assistants. The fact that the child was notwithstanding born alive is all the more marvellous. I was very much impressed in this case with the ease with which the prolapsed hand and face were turned to one side and the podalic version performed. I cannot help thinking that the elevation of the pelvis proved of great value in bringing about the happy result.

Since the above was written another case was met and treated in a similar manner. The history in brief is as follows: A woman in her second confinement was taken with a slow labor on the morning of November 7th. The midwife who was in attendance all day, noted very little progress. Toward evening, with the os dilated to the size of a fifty cent piece, the membranes ruptured and a loop of the umbilical cord presented in advance of the vertex. An hour and a-half later, when I arrived, I found a highly hysterical woman with feeble labor pains. An examination revealed a somewhat contracted pelvis, a cervix not fully dilated, a vertex presentation with head movable, above the brim, and, in the vagina, about six or eight inches of pulsating umbilical cord. Under chloroform anæsthesia, given by Dr. M. Cisin, the patient was drawn up an improvised incline at the foot of the bed, so that the pelvis was elevated to a height of eighteen inches, and the legs and thighs kept extended (Walcher's method). After a little difficulty the cord was pushed back into the uterine cavity and kept back with the aid of a sponge which had previously been boiled. Forceps was applied, but the movable condition of the head and the somewhat diminished conjugate diameter decided me, in the interests of the child, to relinquish them and resort to version. There was no especial difficulty in pushing up the head and getting down a foot, but during the manœuvres

the cord was again brought down. No effort was now made to replace the cord, my only object being to rapidly complete delivery. The body to the neck was delivered with surprising ease, but the birth of the head required considerable traction (Prague method). The child was born in the second stage of asphyxia and required a half hour's efforts at resuscitation before it could be safely left alone. The case impressed me with the following points: 1. The advantage of the elevated hip position combined with extension of the thighs in increasing somewhat the antero-posterior diameter of the pelvis. 2. The ease with which a prolapsed cord can be replaced and kept back with the aid of a fairly large piece of boiled sponge pushed between the presenting part and the pelvic wall (as suggested years ago by Renshaw). 3. The ease with which the presenting head can be pushed up and a leg brought down. 4. The short time in which a version can be done. —*Jour. of Obstetrics.*

PAN-HYSTERECTOMY.

Dr. Christopher Martin read a paper on the above subject, in which the whole uterus, including the cervix, is removed by abdominal section. He referred to the surgeons who had performed it in Germany and America, and also to Jessett and Smyly, who were the first to perform it in this country. He had performed it eight times; six times for myoma, once for rupture of the pregnant uterus, and once in a case of occluded cervix with hæmatometra and pyosalpinx. All his cases had recovered. The patient is carefully prepared, and the skin and vagina are cleansed with antiseptic precautions. All instruments, silk ligatures, gauze sponges, and the water to be used are sterilized. An incision long enough to permit of the easy delivery of the tumor is made, and on its extraction sponges are pushed behind to protect the abdominal viscera. The relations of the tumor of the uterus, the ureters, and the bladder, the position of the ovarian and uterine arteries, etc., are ascertained and a double ligature is passed by a Galabin's pedicle needle through the broad ligament at a spot free from veins about the junction of the middle and upper thirds and midway between the uterus and pelvic wall. By pulling one of the two ligatures forcibly inwards and the other outwards a transverse slit is torn about an inch in length, or it can be made by inserting and expanding a pair of forceps inserted into the ligature opening. The ligatures are tied and the intervening tissue cut through. The ovaries and tubes are removed if possible. The middle third of the broad ligament is similarly treated and the bladder detached from the anterior surface of the uterus until the vagina is reached. This is now opened close to the anterior lip of the cervix. The posterior fornix is next opened. The uterus is now only attached by the lower third of the broad ligaments containing the uterine artery. The tying of these arteries is the most difficult part of the whole operation; usually there is not room for a double ligature, and the ureters must be carefully avoided. After securing the ligature the uterus and its growth are free to be lifted out of the pelvis. Bleeding points should be searched for and secured, the pelvis sponged clear of clot, and all the ligatures cut short except those of the uterine arteries, which are to be drawn into the vagina. Gauze is passed into the vagina and the bladder and other parts allowed to fall over it, but no attempt is made to draw the parts together by sutures. The abdominal wound is closed with silkworm gut sutures. The gauze in the vagina acts as a drain, and is removed on the fifth or sixth day. Dr. Martin does not use the Trendelenburg posture. The uterine ligatures usually separate during the third week and the patient leaves the hospital during the fourth week. There is little shock if the patient is kept warm and the intestines not exposed or handled during the operation. Pan-hysterectomy is a difficult and tedious operation; its dangers consist in chill and shock, slipping of the ligatures with hæmorrhage, damage to bladder or ureters, adhesion of the bowel to the raw surfaces, infection through the vagina, and weakening of the pelvic roof. The last is purely theoretical, and with care other objections are largely obviated. In estimating the value of this operation it requires to be compared with the five other procedures employed for a similar condition: 1. Removal of the uterine appendages is safe in small myomata, but unsatisfactory in large ones. Dr. Martin had removed the appendages in twenty cases for small myomata with one death, and in eight cases for large ones with two deaths. In 90 per cent. of those who recover a cure results, menstruation ceases, and the tumor shrinks. In the other 10 per cent. the patient is not cured, the tumor grows, and the symptoms increase. If a low mortality could be assured, small myomata should be treated by vaginal hysterectomy and large ones by abdominal pan-hysterectomy. 2. Hysterectomy, with extra-peritoneal treatment of the pedicle (clamp cases), has a high mortality—from 15 to 30 per cent. Those who recover pass through the dangers of septicæmia, peritonitis, secondary hæmorrhage from the stump, and ventral hernia afterwards. Sometimes it is impossible to get a safe pedicle if the myoma invades the broad ligament or cervix. Recovery is prolonged. In all these respects pan-hysterectomy is superior to the clamp operation. 3. Hysterectomy with intra-peritoneal treatment of the pedicle is attended with such great risks of hæmorrhage,

suppuration of the stump, peritonitis, and septicæmia that it is even more dangerous than the clamp operation. 4. Vaginal hysterectomy for small myomata compares favorably as regards mortality with removal of the appendages, and of course it is an absolute cure. It is not advisable when the tumor is larger than the fœtal head. 5. Enucleation per vaginam is usually a risky operation except for small submucous tumors to which access is easy. It is justifiable in cases of large sloughing submucous myomata, but in other cases pan-hysterectomy seems to be a sounder and safer operation. The advantages of pan-hysterectomy are that it absolutely cures the patient and has a lower mortality than either the clamp operation, enucleation, or the intra-peritoneal method of treating the pedicle. It is attended by remarkably little shock, the convalescence is easy and uneventful. The wound heals by first intention, the patient is up in three weeks, and there is very slight risk of a subsequent ventral hernia.—*The Lancet.*

SYMPHYSIOTOMY AT THE CLINQUE BAUDELOCQUE IN 1895.—The January number of the *Annales de Gynécologie* contains a paper by Professor Pinard recording the results of labor in cases of pelvic contraction at the Clinique Baudelocque during the year 1895. In the period in question there were 107 cases of contracted pelvis; 45 of the patients were primiparæ and 62 multiparæ. Among 107 cases there were 5 deaths of mothers. In 3 of the fatal cases delivery was effected by symphysiotomy, in 1 by basiotripsy, and in 1 by Porro's operation. In 77 of the 107 cases delivery occurred spontaneously. In the remaining 30 cases some artificial aid was employed. In 20 of the 30 cases delivery was effected by symphysiotomy. In the other 10 cases delivery was effected as follows: in 1 case by version, in 4 cases by basiotripsy, in 1 case by Porro's operation, in 3 cases by forceps, and there was 1 case in which abortion was induced. Among the 20 cases of symphysiotomy there were 3 deaths of mothers, *i.e.*, a mortality of 15 per cent.—and in 3 of the cases the children died, so that the mortality of the children was also 15 per cent. In the paper referred to Professor Pinard gives also the numbers of his symphysiotomies prior to 1895. His total up to date is 69 operations, with 7 deaths of mothers and 8 deaths of children. The mortality has, therefore, been about 10 per cent. It is particularly interesting to observe that among his cases of contracted pelvis last year Professor Pinard had 5 patients on whom he had operated previously, in 4 by symphysiotomy and in 1 by ischio-pubiotomy. In 3 of these symphysiotomy was necessary a second time, but in 2 delivery occurred spontaneously; in one of them, however, labor came on naturally at seven months and a half. A formidable objection to symphysiotomy has been that it endangers the solidity of the pelvis. Sufficient time has now passed to enable Professor Pinard to speak definitely on this point, and he says positively that this solidity is not compromised in subsequent pregnancies, or by repeated symphysiotomies. As regards the best mode of extracting the child after symphysiotomy, when the head is high up he prefers version to delivery with the forceps. He protests against the statistics of symphysiotomy being compared, on the one hand, with those of Cæsarean section, and, on the other, with those of the induction of premature labor. For in cases of Cæsarean section he asserts operators too often choose their cases, and perform embryotomy on a living child if they suspect the patient has already been infected; and as regards the induction of labor, the comparison is not fair, because the operation is undertaken in healthy women who are carefully prepared, so that the risks of infection are reduced to the minimum. On the other hand, Professor Pinard performs symphysiotomy in all cases where the child is living—apart from any consideration of the state of the mother or of the surroundings from which she may have just come. He makes a telling criticism in favor of symphysiotomy as compared with the induction of labor in cases of slight pelvic contraction; in the former the operation is undertaken at term, and when the need for interference is imperative and incontrovertible; but what about women delivered spontaneously of healthy, full-term children, for whom, according to theory, induction of labor, with its high infantile mortality, immediate or remote, had been recommended? It is one of the benefits resulting from the introduction of symphysiotomy that the number of such unnecessary inductions of labor has been reduced.—*The Lancet.*

FOR WHOOPING COUGH.—Herbert B Carpenter relieves that bromoform gives better results than any other treatment for this dangerous and distressing disease. After the paroxysms have diminished a change of air, especially sea air, is most beneficial. As bromoform is but slightly soluble in water, it is best to add some alcohol to the solution, giving it in the following manner:

℞—Bromoform, ... gtt. xlviij.
Spts. rectificat., ... fl. ʒiv.
Aq. dest., ... fl. ℥ j.
Syr. tolutan, q. s. ad. . . . fl. ℥iij.
M. Sig. ℥j in water every four hours.

The taste is scarcely perceptible. It must be remembered that bromoform is very volatile and decomposes readily. It should therefore be kept in closed bottles and protected from the light.—*Phil. Poly.*

NERVOUS DISEASES AND ELECTRO-THERAPEUTICS

IN CHARGE OF

CAMPBELL MEYERS, M.D., C.M., M.R.C.S. Eng., L.R.C.P. Lond.

Neurologist to St. Michael's Hospital. 192 Simcoe Street.

SOME COMMON FORMS OF "NEURASTHENIA" AND THEIR TREATMENT.

BY GEORGE HERSCHILL, M.D., LONDON, ENG.

The invention of the term "Neurasthenia" has been usually ascribed to Beard, who wrote the first scientific work upon the subject. But it is really of much older date, as it may be found in the first edition of Dunglison's Medical Dictionary, which was published in 1833.

After much opposition on the part of the profession, even to the extent of a certain amount of discredit being attached to those physicians who had the temerity to study the subject, it has become recognized as a convenient expression for certain groups of symptoms.

These symptoms were supposed to depend upon an obscure condition of nervous exhaustion, but it is now certain that in a great number of instances this is not the case, and it is the object of the present paper to attempt to show the reader how he may differentiate the different clinical groups which may come under his observation.

In the meantime, the term "Neurasthenia" is a very convenient expression to have for use in practice as a provisional diagnosis to be used in the same way as the word "Indigestion," as we thereby do not commit ourselves to any opinion as to the pathology or true nature of the case. In effect, we are stating merely in one word, instead of many, that certain well-defined groups of symptoms are present, and we reserve our exact diagnosis until the case has been further investigated. It may turn out to be a case of true exhaustion of the nervous centres, or, more probably, one of chronic poisoning by gout, alcohol, tobacco or by toxines absorbed from the stomach or intestinal tract.

Neurasthenia may be described as a generalized affection of the whole nervous system, characterized by diminution of nerve energy and increased reaction to external impressions. It may exist alone, or may be associated with other affections. The objective signs are few, but there are a very large number of absolutely characteristic symptoms. The patient, fortunately, does not suffer from all of these, but only from a selection from the list. These are invariably associated together to form a well-marked group pointing to functional disturbance of one or more organs of the body. It happens, therefore, very often in the practice of medical men, who are not familiar with the subject, that cases of this kind are treated merely as local functional disturbances, instead of as a local expression (*Teilerscheinung*) of a general constitutional condition, and the patient "does not respond to treatment." The extreme importance of a knowledge of the phenomena of neurasthenia to the practitioner will be manifest when I say that as the result of my own personal experience I have found that at least one-third of all the patients who come to consult me, either with "indigestion" or thinking that they have an affection of the heart, are really suffering from neurasthenia, manifesting itself in the gastro-intestinal tract or heart respectively. In making this assertion, I believe that I am much under the mark in my figures. And I have no hesitation in asserting that the success of a man in a high-class practice, will be in direct ratio to his knowledge of neurasthenia, and to his ability to unravel the true pathology of the cases which may come under his observation. He must recognize the fact that although the symptoms in different neurasthenics will all bear a family likeness, and in many instances may be identical, yet the causes, or mechanism of the production of the symptoms may widely differ.

As regards the pathology of neurasthenia, it may now be taken as settled that the symptoms depend not only, as was formerly supposed, upon exhaustion of the nerve cells, but also in many cases upon poisoning of the nervous elements and other tissues of the body by toxic substances circulating in the blood.

Our knowledge of the effect of exhaustion upon the cells of the central nervous system we mainly owe to the valuable researches of C. F. Hodge. He was able to demonstrate that there were always present certain changes in the structure of nerve cells which had been subjected to long continued excitation. His method of investigation was as follows:—The ganglia connected with the leg muscles of a bee which had been flying about all day were compared with the corresponding ones in another which had been confined to the

hive. The nerve centres of a sparrow at seven a.m. were compared with those of one at the corresponding hour in the evening. The sparrow is a very active bird, and works hard for a living, and it is justifiable to presume that it had undergone considerable fatigue between those hours. A ganglion on one of the spinal nerve roots of a cat was electrically stimulated to the point of exhaustion, and then compared with the corresponding unstimulated one on the opposite side. These and many other experiments of a like nature were made. By means of the aid of modern objectives and the improved methods of microscopical technique which the last few years have placed at our disposal, he was able to demonstrate that actual change had taken place in the nerve cells which were fatigued, and not in the untired ones with which they were compared. These changes were invariably present, and consisted practically in loss of cell substance. There was found diminution in the size of the nucleus of the nerve cell, accompanied by irregular outline with loss of reticulate appearance. In the spinal ganglia there was shrinking in the mass of protoplasm with the formation of vacuoles, while in the cells of the cerebrum and cerebellum the pericellular lymph spaces were increased. There was also observed diminution in size in the nuclei of the cell capsules.

But exhaustion of nerve cells, as we have already stated, will not account for all the phenomena of neurasthenia, and there is a good deal of presumptive evidence that they are due to the entrance into, and circulation in, the blood of certain poisons or toxines. And I may say, *en passant*, that it is not improbable that it may be discovered that even the mechanism of the exhaustion of a nerve cell, including the alterations in structure pointed out by Hodge, may be due to the action of a toxine perhaps generated in the nerve itself by its own work. If you take the muscle from a frog and stimulate it electrically until it ceases to respond. you say that you have exhausted it. If you now wash it out through the artery with normal salt solution, it will quickly regain its excitability. This is an experiment familiar to all physiologists. It is evident that you have washed away some substance generated by the muscle work which was producing fatigue by its presence and accumulation within the muscle. Mosso has gone a step further, and proved that the blood of an exhausted animal injected into one which had been kept at rest, produced the characteristic symptoms of fatigue. He was led to think of this experiment by observing that in soldiers who had marched long distances, the arms participated in the fatigue, although the leg muscles had done most of the work. This pointed to the fact that the fatigue was partly caused by something circulating in the blood.

This fact can be easily demonstrated by the following experiment:—Take a frog and subject its muscles to a prolonged electric stimulus, until they are completely exhausted and are incapable of responding to any further current, however strong. Now, after having killed the frog, pound the muscle substance of the limbs which have been subjected to the experiment, into a pulp in a mortar with a little distilled water, and filter. A little of the filtrate injected into a second untired frog, will render its muscles incapable of being excited by a current which would, in its normal state, produce energetic muscular contractions.

These toxic agents have to be removed from the system by the agency of the kidneys, and to a certain extent by the skin, and during the time of their elimination the individual suffers from fatigue. If these waste products are in excess, or if the mechanism by which they are removed from the system is out of gear, then symptoms of the irritable weakness known as neurasthenia is produced.

Moreover, in practice we constantly meet with cases of neurasthenia, evidently due to poisons, such as tea, tobacco, alcohol, and to toxines generated in the gastro-intestinal tract. We stop the indulgence in alcohol, or we wash away a mass of accumulated fæcal matter from the colon, and the patient is soon restored to health.

(To be continued.)

Treatment of Uterine Fibroids—The rapid changes in the manner of treatment of these growths have produced a condition of doubt in the minds of many as to what course they should follow. Penrose, in a review of the subject, says: Hysterectomy is advisable in the vast majority of cases of fibroid tumor of the uterus; in all cases in which there are urgent symptoms from pressure or or in which there are urgent subjective symptoms referable to the uterus: in all fibrocystic, edematous, and myomatous tumors; in all tumors of intraligamentous or subperitoneal growth; in all large tumors which have become decidedly abdominal; in all cases in which we cannot safely and surely remove all ovarian tissue and the whole of the Fallopian tube. The operation of castration should never be undertaken unless the operator is prepared to perform hysterectomy, should this be found necessary. The suitable cases for castration are hard fibroid tumors of small size, of such development that no pressure is produced, and when there are no marked subjective or reflex symptoms. In the case of an old woman who has passed the menopause, in whom the fibroid tumor has stopped growing, and in whom there is no discomfort from the size of the tumor or from pressure, operation is not indicated.—*Am. Jour. Obs.*

PATHOLOGY AND BACTERIOLOGY

IN CHARGE OF

H. B. ANDERSON, M. D., C. M.,

Pathologist to Toronto General Hospital; Professor of Pathology Trinity Medical College, and in charge of the Trinity Microscopic Pathological Laboratory, Toronto General Hospital.
233 Wellesley Street.

INFLUENZA.

The sequels of this disorder have only been studied with care in the course of the epidemics which have prevailed in the last seven years. They escaped the attention of the older observers. They are very numerous. It may be fairly affirmed that many of the gravest characters of the malady occur after the acute stage has passed away, and when convalescence is apparently assured. I think there has possibly been exaggeration in respect of some of the alleged sequels of influenza, still they are, as I have said, numerous. The general asthenic type of the disease is well recognized. The enfeebled mental and bodily states left behind it have been forcibly and sadly brought home to most of us late, both in our own persons and in our patients and friends. Recognizing the fact that each epidemic is signalized by a dominant form for the most part, we may discuss the particular sequels attending, first, the thoracic; secondly, the gastro-intestinal; and thirdly, the nervous varieties of influenza. The personal factor comes in here strongly in respect of each individual affected, and as has been said, "each patient convalesces according to his temperament," and, no less, I would say, his diathesis. Nearly sixty years ago, Sir Henry Holland noted the long persisting influence of this disease upon the constitution, as a remarkable feature; also the variation of parts affected in different individuals, or at different periods in its progress. In respect of sequels ensuing on the thoracic forms, we may note the prolonged course of the peculiar broncho-pneumonia, so often fatal to the weakly and the aged in its earlier stage. Next the onset of tuberculosis. Abscess of the lung has been several times met with supervening on pneumonia, and Pfeiffer's bacillus has been found in the yellowish-brown sputa expectorated from it, together with elastic fibres from the lung.

Pleurisy is common and empyema may result. The heart is often severely infected. Great weakness of the organ is common; arrhythmia, bradycardia, tachycardia, and pseudoanginal attacks may occur long after the illness. Vertigo is a very frequent symptom, a tendency to it persisting for some months after the attack. The gastro-intestinal variety of influenza may lead subsequently to vomiting, simple catarrhal jaundice, chronic gastro-intestinal catarrh, diarrhœa, or constipation, with marked nervous depression. The nervous variety is apt to lead up to many subsequent troubles. A rapid denutrition of nerve centres is more or less common in all cases presenting any severity in the early stages. Neurasthenia may prevail for one or two years subsequently. Polyneuritis is a common sequel. The arms may be paralyzed with both motory and sensory disturbance, and wrist-drop may occur; moreover, the same process may occur over large areas. Neuritis may involve cranial and other nerves locally. Encephalitis, myelitis, sclerosis of various tracts of the spinal cord, neuralgia, especially the intercostal variety, conjunctivitis, iritis, otitis media, mastoid abscess, malignant endocarditis, parotitis, orchitis, and lymphadenoma, with other affections, have been noted among sequels in various recent epidemics in parts of the world. Somnolence, or extraordinary drowsiness with hebetude, is a note-worthy feature. Headache, vomiting, and various mental disorders may occur. Melancholia leading to suicide is by no means uncommon. Mental incapacity long remains, and many patients affected in middle life tell of inability for efforts, mental and bodily, that were easy to them previously. They feel many years older in all respects. The natural level of health may never be regained, or not fully re-established for two or three years after a severe attack. Abscess of the brain has been several times noted as a sequel, also simple lepto-meningitis. Mental affections may also sometimes subside after an attack. The sequels of this disease are doubtless often very varied, and often extraordinary. A medical friend of mine has been unable to take coffee since he suffered from a severe attack in February, 1895, without feeling considerable cardiac discomfort, although there was no arrhythmia, and the heart sounds remained normal. In his case, too, and in another there remained for months subsequentely a liability to paroxysms of low temperature, with extreme chilliness and distressing sensations; observations made in the mouth, axillæ, and rectum recording a temperature of only 96°. Such attacks continued to occur once in every eight or ten days,

and not infrequently in the night. (Nothing afforded so much relief as an ounce of whisky taken as hot toddy.)

Influenza, in common with other infectious diseases, distinctly appears to predispose to the onset of other diseases. The lowered vitality induced by the primary malady leaves the patient a more ready prey to the attack of any other he may be exposed to. Or a distant interval may elapse between the one disorder and the other. Translated into the language of to-day, we may substitute for the term "lowered vitality" a condition of the solids and fluids of the body in respect of their powers of resistance to invasion by specific toxins which is unequal to the struggle between them and the infection. It is also conceived by Broadbent and others that germs of disease may lie latent in the body and remain inoperative till the resistance of the host is impaired by some circumstance such as infectious or other illness, or traumatism, which forthwith liberates the latent germ with the consecutive onset of a fresh ailment. The occurrence, so frequently, of tuberculosis after injuries and infectious fevers, may possibly be explained in this way, also the development of tertiary syphilitic disorders.

Relapses of influenza are commonly met with, and may occur several times at fairly long intervals after the primary infection and long after the original epidemic has passed away. We may doubt the occurrence of fresh infection from without, as by sporadic influence, in many such instances, and I think we may consider as probable a view of this matter, for which I am indebted to our Registrar, Dr. Edward Liveing. He conceives it to be not unlikely that the toxins of influenza may act very much as does that of malaria, leaving behind it residues of specific infective matter, which wake up into activity from time to time, and induce fresh outbursts of the disease in response to any conditions which temporarily lower the general vitality of the body. We may thus regard such relapses as evidences of sequels of the direct residual class. I have experience of cases in which four or five attacks have occurred within two or three years, and at varying intervals. The conditions in respect of symptoms, type of pyrexia, and general character leave no doubt as to the true nature of the disorder, and intelligent patients, in three cases in the persons of well-known members of our profession, have recognized only too well the specific qualities of it.

Acute bronchocele has been several times observed to follow influenza. One lobe may become enlarged and give rise to dyspnœa, or orthopnœa with a fluctuating tumor. Incisions give exit to viscid fluid, with relief to the symptoms, but the discharge may continue to flow for months. One of the most remarkable cases I have seen occurred in a gentleman, aged 68, in whom great wasting had occurred in the pectoral muscles. This followed an attack of influenza nine months previously. Twenty-eight pounds weight had been lost during that time. The ribs were plainly visible. There was marked difficulty of inspiration, and the upper portion of the chest hardly moved. There was no myxœdema. The brachial muscles were soft, but those of the lower limbs were firm. There was general weakness and early fatigue on walking. Improvement slowly followed treatment by massage, warm douching, and dosage with strychnine, phosphorus, and arsenic. This man was at one time apparently in peril from respiratory difficulties. There was evidently some focal myelitis in the cervical portion of the cord. Recovery ensued after treatment. Bladder troubles may set in and persist after an attack. Diabetes has been several times observed as a sequel. Arthritis and multiple synovitis sometimes follow influenza. At the outset of many cases it is sometimes difficult to be sure that rhematic fever is not in progress. There may be pains in joints and pyrexia. The two disorders may even occur together and lead to a very grave condition, owing to carditis. Cases have been carefully observed in which symptoms of myelitis, involving several tracts in the cord as well as the cornua, have led to arthritis or true spinal arthropathy.—*Brit. Med. Jour.*

Anti-Typhoid Serum.—In the course of a communication to the Paris Société de Biologie on February 22nd on the Early Diagnosis of Typhoid Fever by a Bacteriological Examination of the Stools, M. Chantemesse said that last June he had succeeded in immunising several horses against the virus of typhoid fever. He had obtained the serum of such strength, that one-fifth of a drop inoculated into a guinea-pig twenty-four hours before infection protected it against a dose of typhoid virus fatal to animals not previously injected with the protective serum. It was ascertained, also, that injections of the serum produced no injurious effects upon a healthy man. M. Chantemesse stated that he had since employed injections of serum in three cases of typhoid fever. The temperature showed a regular fall from the time the first injection was made, and seven days after the commencement of the injections all three patients were quite free from fever, and had commenced to convalesce. M. Chantemesse added that the cases were not yet sufficiently numerous to permit any trustworthy conclusion to be drawn.—*Brit. Med. Jour.*

Tomatoes are a powerful aperient for the liver, a sovereign remedy for dyspepsia and indigestion. Tomatoes are invaluable in all conditions of the system in which the use of calomel is indicated.

NOSE AND THROAT

IN CHARGE OF

J. MURRAY McFARLANE, M. D.,

Laryngologist to St. Michael's Hospital. 32 Carlton St.

MODERN METHODS OF TREATING DISEASES OF THE NOSE AND THROAT.

BY O. B. DOUGLAS, M.D., NEW YORK.

Our interest in diseases of the nose and throat seems to centre upon treatment—that which cures. But first, we must have a knowledge of the diseases, and it may be well to know how we get them—the ætiology—and to consider their symptoms, complications, and effects.

Diseases of the nose and throat are more numerous—of more frequent occurrence—than at first thought we might suppose; there is a longer list of them, and a larger train of evil effects, than is likely to be recognized by one who has not carefully considered this matter. In the twenty minutes devoted to this subject I can hardly do more than mention a few of the commoner diseases, such as are of most frequent occurrence, and cause, in the aggregate, the most suffering.

Things we see oftenest impress us the least. We give more attention to the infrequent diseases than to those we are called oftener to treat. Common, every day conditions, lose their terror, however bad they may have seemed or really were. This law (of callousness) explains our indifference to a common cold, which often is but the initiatory stage of grave and fatal maladies.

President Lincoln is said to have observed that "the Almighty must consider common things important, for He made so many of them." These diseases are important because they are so numerous and so far-reaching in their effects. The opprobrium of our profession is not in curing common ailments, those little ills which, in the aggregate, cause greatest distress, not the rare, infrequent, obscure conditions.

Diseases of the nose and throat may be acute or chronic, simple or complicated, local or general, organic or traumatic, acquired or congenital, benign or malignant. An entire catalogue comprising the acute, subacute, and chronic stages would be long and tedious and not to our purpose. But we should be able to distinguish syphilitic, tuberculous, cancerous, exanthematous, diphtheritic, mycotic, traumatic, and other less important conditions. We must recognize the peculiarities of various tumors; the condition of the numerous sinuses (accessory to the nose and throat), excessive or scanty secretions and their character, empyema, necrosis, etc.

We have coryzas, congestions, inflammations, hypertrophies, hyperplasias, atrophies, and ulcerations; not only these special diseases of the nose and throat, but many so-called constitutional diseases which affect these organs seriously. Of the two hundred and fifty more or less distinct diseases that flesh is heir to, a large percentage show effects in the throat, not mere complications, but as a part of the disease; we look there for confirmation of our diagnosis.

There are never two noses alike interiorly, any more than there are two faces alike; it requires the exercise of good judgment and a moderate degree of skill, often, to distinguish pathological from physiological conditions, Cultivated common sense is never out of place when called in consultation to a case of ordinary nasal catarrh.

That which in common parlance is termed catarrh is but a symptom, an expression or effect of a diseased condition. We do not think of bleeding as a disease, but as a result of traumatism or other cause. In the popular mind catarrh means indefinitely (as charlatans teach) a blood disease, a bad breath, difficult nasal respiration, a dry throat, enlarged tonsils, or bad taste. Patients will tell you their palate is down (meaning an elongated uvula), that they have pain in the nose, over the eyes, in the temples, or back of the ears; that they have a hacking cough, a frequent desire to clear the throat, and point to the suprasternal notch, saying, "*There* is all the trouble." These ills may result from one and the same cause; and I desire especially to emphasize the importance of determining first of all *the cause of that of which the patient complains.*

Having determined the cause, we seek to remove it. If it is a syphilitic sore throat, give "mixed treatment" if you wish, but you will oftener get positive results from the use of large, increasing doses of potassium iodide. I am in the habit of ordering twenty grains, in solution, to be taken in a glass of milk before eating, three times a day. This quantity is to be increased five grains each day until the desired effect is produced, unless

undue iodism results, when the medication may be suspended for a few days. Often three hundred grains in a day are taken by a patient. Locally, spray the diseased parts with peroxide of hydrogen and insufflate aristol.

Tuberculosis of the larynx is one of the most distressing maladies humanity is called to endure. Our modern methods of treatment have greatly lessened the suffering and resulted in positive cures in numerous cases. The principle which underlies the various methods of treatment is to destroy the germs in their local habitat by curetting, and applying either pure lactic acid three times a week, pure ichthyol (Dr. Berens' method), or a twenty-grain solution of silver nitrate (as practised by Dr. H. B. Douglass). A later method, which promises excellent results, is the injection of a twenty-five-per-cent. mixture of creosote by means of a special syringe devised by Dr. Chappell, through whose kindness I am able to show you the original instrument for this purpose. You can find a full account of his method in the *New York Medical Journal* of March 30th. Local treatment, other than to soothe and cleanse, is of little benefit, unless resort is had to these heroic measures.

Sarcoma and carcinoma are best treated by extirpation, if that is possible. Dr. Coley and others report some wonderful results from the injection of the specific germ of erysipelas into the tissues surrounding these tumors in cases where they cannot be removed.

In treating diphtheria and all acute inflammations of the throat mild medicines given often will serve you far better than harsh and heroic treatment at longer intervals. I do not believe that antitoxine has come to stay. Professor Winters recently gave us (at the New York Academy of Medicine) an *exposé* of its use in the Willard Parker Hospital for contagious diseases. It seemed to do more harm than good.

I know of no surer way to cure diphtheria than to attack it *in situ*. My method which has given best results is to begin at the earliest stage possible, and give the following medicines with unfailing regularity:

No 1:

℞—Tinct. aconiti. . . . . gtt. xx.
Tinct. belladonnæ, ... ℥ ss.
Glycerini, ... ℥ iv.
Aquæ gaultheriæ, . . . ad ℨ iv.

No. 2:

℞—Potass. chloratis. } . . . . āā ℥ ss.
Sodii bromidi. }
Glycerini, ... ℨ ss.
Tinct. ferri chlo.r, ... ℥ ss.
Aquæ, ... ad ℥ iv.

Dose: Half a teaspoonful for an adult.

These are to be given alternately every half hour, thus bringing the doses fifteen minutes apart. This frequency may seem severe upon the patient, who gets little sleep during the first twenty-four hours, but we have a severe antagonist to combat, and must not relax our warfare till we conquer, which I expect to do with almost as much certainty as I should in a case of measles. In addition to Nos. 1 and 2 I should use a spray—often and freely—composed of twelve grains of carbolic acid in four ounces of limewater. All these preparations are agreeable to take. I give liquid nourishment freely, milk being ordinarily best, also whisky, sparingly at first, but sufficient to get the desired effect as a tonic. Bichloride of mercury may be of service sometimes. Intubation or tracheotomy is to be resorted to if necessary.

(To be continued.)

ACROMEGALY INVOLVING NOSE, PHARYNX AND LARYNX.—Sometime ago Dr. W. F. Chappell reported a case of this kind to the New York Academy of Medicine (*American Medical-Surgical Bulletin*). An examination showed that the inferior turbinated bodies were enormously enlarged; the other structures in the nasal cavity appeared normal. The uvulva, the interior and posterior pillars, and the soft palate, were very much thickened; also the tonsils and their capsules. The lingual glands were much hypertrophied. An external examination showed that the larynx was very much enlarged. The epiglottis was thickened. The arytenoid cartilages and the ventricular bands were enlarged. The opening between the vocal cords was very small. While the patient remained quiet, respiration was only slightly impaired, but excitement produced labored breathing and a crowing sound during both expiration and inspiration. During one of these attacks of dyspnoea the patient died.—*Langsdale's Lancet.*

INFECTION THROUGH BOOKS.—At a recent meeting of the Société de Bologie, du Cazal and Catoin (*Minchener medicin. Wochenschrift*, 1896, No. 1, p. 22), detailed the results of an investigation to determine whether books were capable of transmitting contagious diseases. The streptococcus, the pneumococcus, the diphtheria-bacilli, the tubercle-bacillus, and the typhoid-bacillus were thus studied. Animals inoculated with cultures prepared from books contaminated with the products of the various conditions in which the organisms named were found developed the given affection. It is thus necessary to practice disinfection of books that have been used or in any contaminated by persons suffering with infectious diseases.—*Med. News.*

THE CANADA LANCET,

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address*, Dr. J. L. Davison, 12 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P. O. Orders to be made payable to* Dr. G. P. Sylvester, Business Manager, 585 Church St., Toronto.

AGENTS.—Dawson Bros., Montreal; J. & A. McMillan, St. John N.B.; Canadian Advertising Agency, 60 Watling St London. 5 Rue de la Bourse, Paris.

Editorial.

COUNCIL MATRICULATION.

The prescribing of requirements for the registration of matriculants is one of the most important functions of the Council, and, therefore, no matter how high or how low the standard adopted, one would naturally look for differences of opinion regarding matters that require so much thought and consideration.

Though the various Universities have largely promoted mutual good feeling in accepting the leaving certificates issued by the Educational Department; they still reserve and exercise the right to conduct examinations to accommodate those who have not secured this standing, either through choice or failure.

The Medical Council has always sought to make its requirements work in harmony with the regulations of the Deparment, believing that such would fairly guarantee uniformity of attainment. Some outsiders have held that a certificate of Matriculation in any Canadian University should be accepted. This divergence of opinion was not a potent factor prior to last June when the Council unanimously took a radical step in ordering a more difficult examination to come into force in 1897.

As is known, during the recent session of the Legislature a growing dissent was expressed to the Government, and as a consequence, the Minister of Education introduced a bill for the purpose of fixing the standard. This contemplated legislation would have been somewhat drastic in character, and perhaps not in the interest of either the profession or the public at large, as it would have lessened the existing requirements which cannot be said to be prohibitory in their nature; for, other things being equal, culture and liberal training have always the start in the race for usefulness, success, and popularity in its highest sense.

After the first reading of the bill the Hon. Mr. Ross courteously held a conference with the Legislative Committee of the Council, at which were also present the resident members. As a result of the deliberation a compromise was effected and the bill was withdrawn on the understanding that the members of the deputatiou would use their influence next June to secure the passing of a measure embracing the provisions of the agreement. The Executive Committee subsequently met and directed that all applications be accepted on these terms prior to their official adoption at the next session of the Council.

Space precludes giving the full text of the compact, but we mention in brief its features, which no doubt will form the basis of the contemplated enactment by the Council.

The standard remains practically the same as at present, viz.: the Departmental junior leaving with chemistry and physics. The department has instituted no supplemental examinations, and equivalents have not hitherto been allowed by the Council, consequently many deserving cases have not been provided for, and to relieve such disabilities the following conditions are laid down :—

1st. Any student in medicine after having attended not less than two courses of lectures at any chartered College or Medical School in Canada shall be entitled to take the primary examination, providing that the standing obtained at such examination shall not be allowed until the Departmental Certificate has been presented. This, without loss of time in the professional course, gives ample opportunity for students to pass the preliminary examinations, who failed, prior to entering on the study of medicine.

2nd. The Council will accept in lieu of the Departmental Examinations a certificate of Matriculation in Arts from the Registrar of any Canadian University, together with the proof of having passed the examination in Arts at the end of the first year.

3rd. Last June a vast number of petitions were forwarded to the Council praying for registration,

and setting forth an almost endless variety of equivalents, the majority of which could not be entertained without radically changing the regulations. To meet all worthy, back standing cases it is further provided that all who Matriculated in Arts in Canadian Universities prior to November, 1895, shall be eligible for registration.

The profession may well feel pleased that the problem has been happily solved, the standard should commend itself to all, and we trust that it will appear unaltered in the annual announcement for many a year to come.

THE PROPOSED LENGTHENING OF THE MEDICAL SESSION.

For several years past it has been felt by medical educationists that some change was urgently needed in the direction of lessening the congestion of the student's life while at college. It is well known that the amount of work demanded of students of medicine has increased by leaps and bounds during the past two decades, and yet the time devoted to its acquirement, and the methods in vogue as to didactic teaching, are practically to-day what they were twenty years ago. True, the summer session of eight weeks was introduced a few years ago, but has never been popular with either students or professors, or satisfactory in its working. The break in the holiday was at such a time, and of such a length, that it acted as a hindrance to many who could have profitably spent the whole six months at some other employment, or with a physician in his practice. Now, with the lengthing of the session to eight months the summer session might be abolished and still allow more time for preparation on the part of the student by several months than has heretofore been allowed.

Thus a four years' course of eight months each, will give thirty-two months devoted to regular college life, an increase of six months on the old arrangement and equal with the five years' course now on the *tapis*.

That such a course would be an improvement on what has existed in the past will not admit of doubt; and it is held by practical men and teachers that the four consecutive sessions of eight months each would be more satisfactory than four sessions of six months each, one summer session and a fifth year of study.

It is to be hoped that if the Council see fit to make the change, which step will, we believe, be urged upon it at its next meeting, no increase in the number of lectures will be made, by some medical school, or department of a medical school, anxious to outshine all others by the amount of work done by its professors or lecturers. In our opinion medical students have been lectured to death for the past eight or ten years. They have been crammed and spoon-fed. From early morn to frosty eve they have been in attendance upon some teacher who filled them *secundum artem* with facts.

Time for study, reflection and discussion was wanting in the everlasting rush for lectures. This state of things was brought about largely by one school trying to make a better showing than the other, with the result that "the other" had to put on a spurt and keep an even showing as to lecturers, professors, clinics, laboratory courses, *et al, ad infinitum.*

Steps have been taken to memoralize the Council in this direction, a committee, consisting of representatives from all the medical colleges in Ontario having met for this purpose. It is to be hoped that in the Council wise enough counsels may prevail to consider well the suggestions of men who are actively engaged in teaching, and, therefore, in touch with the methods of to-day. We have always held that five years of professional study, together with the long study necessary for matriculation in medicine, is too much to pay for the whistle. As time goes on, and we notice the condition, financial and social, of the medical man in Ontario, we are more and more convinced that a five years' course would be prejudicial to the best interests of the country and of the profession.

THE ONTARIO MEDICAL ASSOCIATION.

The local committee of arrangements and the committee on papers and business of the Ontario Medical Association have been at work for two months past, the former in arranging for the entertainment of the Association, the latter in preparing a programme and other work of the Association. There being nearly 1,000 members

of the Association and over 3,000 doctors in Ontario, there should be a large gathering at Windsor in June. A general idea prevails among the members that the railways should be more liberal in their rates, not out of sympathy for the self-sacrificing medical men, who are tied down to their duties more strongly than other men, but from a purely business standpoint. The fare and one-third is such a pittance of a reduction that it offers little extra attraction to the medical man to take a trip. A special rate, say of $2 or $3 from Toronto, should induce 300 city men to attend, leaving 100 to care for the citizens while their *confreres* are away.

From other points through the Province an unreserved and unqualified two-thirds, or, at least, one single fare would pay the railways and help the Association wonderfully; for the men who go once, go always.

Following is a partial list of papers and discussions which have already been promised by the members :—

Discussion in Medicine.—Treatment of Phthisis, W. J. Geikie, Toronto; Geo. Hodge, London; V. H. Moore, Brockville.

Discussion in Surgery.—Operation—Treatment of Mammary Carcinoma, W. Burt, Paris; A. B. Welford, Woodstock; G. T. McKeough, Chatham.

Discussion in Obstetrics.—Treatment of Puerperal Sepsis—H. T. Machell, Toronto; G. Acheson, Galt; H. Meek, London.

Occipito-Posterior Presentations—A. A. MacDonald, Toronto; Diphtheria, C. R. Charteris, Chatham; the Rational Treatment of Typhoid Fever, J. P. Armour, St. Catharines; the Differential Diagnosis of Typhoid Fever, G. R. Cruickshanks, Windsor; ————, A. McPhedran, Toronto; Anæsthesia, Crawford Scadding.

Dr. Victor C. Vaughan, of Ann Arbor, has consented to be present, and a number of other prominent American medical men have been invited.

TRINITY ALUMNI ASSOCIATION.

The fourth annual meeting of this growing and prosperous Society was held in Convocation Hall, Trinity University, April 7th.

The number of members in attendance was larger than ever before, and the meeting was an unqualified success. The profession was well represented by Sir William Hingston, of Montreal; J. H. Carstens, of Detroit; P. D. Goldsmith, of Peterborough; and many others, who read papers and entered into discussions. A full report of the proceedings, issued as a supplement to this number of THE CANADA LANCET, makes any further notice of this part of the programme unnecessary.

The President, Dr. McKay, was unfortunately unable to be present at the meeting, but his place was ably filled by Dr. Stark, of Toronto. Dr. Clouse was in his place as Secretary, and deserves the thanks of every graduate of Trinity for the efforts put forth to make the meeting a success.

In the evening the annual banquet was held at the Rossin House, where a large number of members and invited guests gathered reund the hospitable board. Dr. McKay was in the chair, and the occasion was one to be remembered by all present.

The speeches were, as usual, excellent, and every one went away feeling sure that the Association is doing a good work not only for Trinity but for the science of Medicine.

CANADIAN MEDICAL ASSOCIATION.

This Association meets at Montreal on August 26, 27, and 28th, when it is expected there will be the largest gathering that has been held for years. The Montreal men seem to have an affection for the Canadian Medical Association and will do everything in their power to make the meeting a brilliant success.

A fair sized nucleus of a programme is, we believe, already developing, and we feel sure that it will be equal to, if not ahead of any of the excellent programmes for which this old Association has always been noted.

It is unfortunate that in past years the Railway men have not seen their way clear to grant better rates to doctors attending Medical Associations. Without a doubt it would pay the railways through the increased number of men that would attend. Of course the objection is made that if they do this for one group of men, they will have to do the same for others, but the position of the doctor is entirely different for he pays his own way from start to finish and loses practices while he is gone; while the delegate to a conference has

his railway expense paid, has no hotel bill, and his work is there for him when he comes back.

MEDICAL EXAMINATIONS.

TRINITY MEDICAL COLLEGE.

PRIZE AND SCHOLARSHIPS.

Dr. Sheard's prize in Physiology in the First Year—W. A Kerr.

SCHOLARSHIPS—*First Year*—1st, $50, Wm. A. Kerr; 2nd, $30, W. H. Marshall; 3rd, $20, S. J. Hazlewood.

Second Year—1st, $50; E. Shoemaker; 2nd, $30, N. R. MacKay.

Third Year—1st, J. C. Ryan; 2nd, $30, C. J. Copp.

MEDALS—*The Second Trinity Silver Medal*—Cloudesley Herbert Brereton. *The First Trinity Silver Medal*—William John Beatty. *The Trinity Gold Medal*—Harvy Clare.

FINAL ("FELLOWSHIP DEGREE").

Candidates who obtained 75 per cent. and over—Harvey Clare, William John Beatty, Cloudesley Herbert Brereton, George William Barber, Perry G. Goldsmith.

Candidates with First Class Honors—70 per cent. and over—F. J. Hart, A. A. Beaty, W. McQ. Teetzell, D. Jamieson, W. H. Weir, P. S. McLaren, J. R. McRae, G. S. Cameron, W. A. McIntosh, S. H. Corrigan, H. H. Milbee, C. H. Smith, S. D. Weir, W. R. Crowe, V. H. Hart, L. A. Marks, G. Welch.

Candidates with Second Class Honors—60 per cent. and over.—J. S. Nedd, H. S. Roberts, T. J. Bell, C. R. Sneath, E. H. Lapp, G. V. Harcourt, J. J. Elliott, J. H. Allin, J. A. Oliver, J. Gibbs, R. H. Foster, E. Doan, W. S. Harper, A. Ruppert, A. F. Reynar, T. J. Caldwell.

Passed.—H. G. M. Nyblett, H. J. Watson, W. G. V. Forbes, J. H. Dancey, J. R. McMurrich, J. J. A. Sutherland, J. P. Lee, G B. Mills, J. B. Thomson, J. G. White, T. W. H. Young.

TRINITY UNIVERSITY.

Final Examination for M.D., C.M.

Gold Medal and Certificate of Honor.—J. R. McRae.

Silver Medal and Certificate of Honor.—H. Clare.

Certificate of Honor.—T. S. Cameron, W. J. Beatty, W. H. Weir, E. S. Hicks, T. V. Harcourt, D. Jamieson.

The following gentlemen were also admitted to the degree of M.D., C.M.:—N. J. Tait, V. A. Hart, C. H. Millbee, G. W. Barber, P. G. Goldsmith, Miss T. G. Head, C. H. Brereton, J. S. Nedd, J. J. Elliott, J. Gibbs, W. M. Teetzel, W. A. McIntosh, W. S. Harper, J. H. Rivers, H. S. Roberts, S. H. Corrigan, J. H. Allin, A. W. M. Row, F. J. Hart, G. Welch, Miss M. H. Irwin, J. H. Oliver, J. D. Weir, E. A. Lapp, A. Ruppert, Miss A. Verth, J. B. McMurchy, R. H. Foster, W. G. N. Forbes, J. P. Lee, P. S. Maclaren, W. H. Taylor, A. A. Beaty, C. R. Sneath, C. H. Sills, C. H. Smith, L. H. Marks, T. H. Bell, E. B. Boyes. E. Doan, J. H. Dancey, T. H. Caldwell, A. F. Reynar, H. G. H. Nyblett, W. A. Kurtz, G. B. Mills, R. Moore, J. B. Thompson, E. A. Fraser, J. McDonnell.

REMEDIAL FOODS.—*The Times and Reg.* says: Celery is invaluable for those suffering from any form of rheumatism, for diseases of the nerves and nervous dyspepsia.

Lettuce for those suffering from insommia.

Watercress is a remedy for scurvy.

Peanuts for indigestion. They are especially recommended for corpulent diabetes. Peanuts are made into a wholesome and nutritious soup, are browned and used as coffee, are eaten as a relish simply baked, or are prepared and served as salted almonds.

Onions are almost the best nervine known. No medicine is so useful in cases of nervous prostration, and there is nothing else that will so quickly relieve and tone up a worn-out system. Onions are useful in all cases of coughs, colds and influenza; in consumption, insomnia, hydrophobia, scurvy, gravel, kidney and liver complaints. Eaten every other day they soon have a clearing and whitening effect on the complexion.

Spinach is useful to those with gravel.

Asparagus is used to produce perspiration,

Carrots for sufferers from asthma.

Turnips for nervous disorders and for scurvy.

Raw beef proves of great benefit to persons of frail constitution, and to those suffering from consumption, It is chopped fine, seasoned with salt and heated by placing it in a dish of hot water. It assimilates rapidly and affords the best nourishment.

Eggs contain a large amount of nutriment in a compact, quickly available form. Beaten up raw with sugar they are used to clear and strengthen the voice. With sugar and lemon juice the beaten white of egg is to relieve hoarseness.

Fresh ripe fruits are excellent for purifying the

blood and toning up the system. As specific remedies, oranges are aperient. Sour oranges are highly recommended for rheumatism.

Honey is wholesome, strengthening, cleansing, healing and nourishing.

Cranberries for erysipelas are used externally as well as internally.

Lemons for feverish thirst in sickness, for biliousness, low fevers, rheumatism, coughs, colds, liver complaints, etc.

Blackberries as a tonic. Useful in all forms of diarrhœa.

Figs are aperient and wholesome. They are said to be valuable as food for those suffering from cancer; they are used externally, as well as internally.

Apples are useful in nervous dyspepsia; they are nutritious, medicinal and vitalizing; they aid digestion, clear the voice, correct the acidity of the stomach, and are invaluable in rheumatism, insomnia and liver troubles. An apple contains as much nutriment as a potatoe in a pleasanter and more wholesome form.

Grapes dissolve and dislodge gravel and calculi, and bring the stomach and bowels to a healthy condition.

Pie plant is wholesome and aperient; is excellent for rheumatic sufferers and useful in purifying the blood.

Uterine Inertia.—A query recently propounded to the *Medical Age* recalls a circumstance happening some fifty years ago in Scotland, and recorded in the *Med. Gazette:*

A farmer in the neighborhood of Edinburg, son of an eminent surgeon of that city, frequently had cows in great distress during accouchement, and now and then, perhaps, like other farmers, lost a cow, in the act of parturition. On one occasion, when a poor animal of considerable value had been suffering for a very long time, and there was every prospect of an unfavorable issue, and it seemed inevitable the creature must die undelivered, the owner hurried into Edinburg and took council with the eminent veterinary professor, Mr. Dick. At the suggestion of the latter, with all expedition possible, six or eight quarts of tepid water were thrown into the animal's uterus, the hind quarters being previously elevated so as to prevent a return of the fluid. The liquor amnii had completely escaped at the early stage of labor, and it was twenty-six hours after this event when Dick's ingenious device was applied; and by this means it was found by external palpation that the calf was once more floating freely in the womb cavity. The animal, however was so completely exhausted there seemed no hopes of the calf being expelled by natural efforts; nevertheless a few minutes after injection a vigorous pain came on and a live calf was delivered; the cow sustained no other ill consequences than a few days' weakness, the natural effects of previous suffering.

Commenting upon this fact the *Med. Gazette* added: "A neighboring surgical accoucheur in large practice was so much struck with the simplicity and apparent safety of the operation, that he subsequently adopted it, with unqualified success." In one instance it supplied a need that avoided the use of long forceps. On a second occasion, but for the water injection, turning and forcible delivery would have been indispensable to saving the patient's life. In many other cases by the injection of a quart of tepid water the patients were delivered of living children without any unfavorable symptoms ensuing."

It is remarkable this procedure has not obtained more general recognition, since its value does not admit of a shadow of doubt; and with modern aseptic measures there is no reason whatever why it should not become a general procedure, thus obviating long suffering, often the need for forceps, preventing further exhaustion to the patient, and avoiding the accidents that of late are of too frequent occurrence,resulting in torn and lacerated perineums.

Propriety vs. Decency.—In New York a certain society of women, says the *Medical and Surgical Reporter*—presumably of the new kind, though with some very old-fashioned and disreputable notions—is endeavoring to secure State legislation providing that only married physicians be employed as assistants in insane asylums where women are confined. It trusts that the good sense of legislators will check the effort to enact such a bill. Prudishness rests on a substratum of nastiness, and the present movement deserves the hearty condemnation of the medical profession, as of all clear-minded men and women, for a variety of reasons.

You are right, dear *Medical and Surgical Reporter*. New York is not the only city on this continent in which strong (*sic*) minded women, and weak-minded men, dabble in nasty matters, and sometimes secure legislation which is not only a disgrace to the intelligence of the 19th century, but a standing menace to the health of our young men and the chastity of our young women.—[ED.]

THE Detroit and Cleveland Steam Navigation Company's steamers are now running daily (except Sundays) between Detroit and Cleveland. When travelling East or West, North or South, try to arrange to take advantage of these luxurious steamers between Michigan and Ohio. If you are contemplating a summer outing, write A. A. Schantz, G. P. A., Detroit, Mich., for illustrated pamphlet, which gives full information of a trip to Mackinac via the Coast Line.

Books and Pamphlets.

SAUNDERS' AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY. Edited by George M. Gould, A.M., M.D., assisted by eminent American physicians and teachers. Philadelphia: W. B. Saunders.

Notwithstanding the rapid multiplication of medical and surgical works, still these publications fail to meet fully the requirements of the general physician, inasmuch as he feels the need of something more than mere text-books of well-known principles of medical science. Mr. Saunders has long been impressed with this fact, which is confirmed by the unanimity of expression from the profession at large, as indicated by advices from his large *eorps* of canvassers.

This deficiency would best be met by current journalistic literature, but most practitioners have scant access to this almost unlimited source of information, and the busy practitioner has but little time to search out in periodicals the many interesting cases, whose study would doubtless be of inestimable value in his practice. Therefore, a work which places before the physician in convenient form an epitomization of this literature by persons competent to pronouuce the value of a discovery or of a method of treatment cannot but command his highest appreciation. It is this critical and judicial function, assumed by the Editorial staft of the "American Year-Book of Medicine and Surgery."

The editor, whose experience peculiarly qualifies him for the preparation of this work, not only review thes contributions to American journals, but also the methods and discoveries reported in the leading medical journals of Europe, thus enlarging the survey and making the work characteristically international. These reviews are not simply a series of undigested abstracts indiscriminately put together, nor are they a retrospect of "news" one or two years old, but the treatment presented is synthetic and dogmatic, and includes only what is new. Moreover, through expert condensation be experienced writers, these discussions are comprised in a single volume.

The work is replete with original and selected illustrations skilfully reproduced, for the most part, in Mr. Saunders' own studios established for the purpose, thus ensuring accuracy in delineation, affording efficient aids to the right comprehension of the text, and adding to the attractiveness of the volume.

PRINCIPLES OF BACTERIOLOGY. By A. C. Abbott. Philadelphia: Lea Brothers & Co.

The appearance of a third edition of this book, after a year's interval since the publication of the second edition, in itself attests the popularity this work has attained among those interested in Bacteriology. It is well-printed, clear, concise and thoroughly up to date, and is, consequently, especially well suited for the use of the medical student, and the busy practitioner who has not time to wade through more voluminous works. Altogether it is a very satisfactory book.

COLOR-VISION AND COLOR-BLINDNESS. A Practical Manual for Railroad Surgeons. By J. Ellis Jennings, M. D., (Univ. Penna.), Formerly Clinical Assistant Royal London Ophthalmic Hospital (Moorfields); Lecturer on Ophthalmoscopy and Chief of the Eye Clinic in the Beaumont Hospital Medical College; Ophthalmic and Aural Surgeon to the St. Louis Mullanphy and Methodist Deaconess Hospitals; Consulting Oculist to the Missouri, Kansas, and Texas Railway System; Fellow of the British Laryngological and Rhinological Association; Secretary of the St. Louis Medical Society. Illustrated with one colored full-page plate and twenty-one photo-engravings. Crown octavo, 110 pages; Cloth, $1.00 net. Philadelphia: The F. A. Davis Co., Publishers.

The Canada Lancet.

VOL. XXVIII. | TORONTO, JUNE, 1896. | No. 10.

SUB-ACUTE AND CHRONIC CYSTITIS TREATED BY THE VESICAL BALLOON

By J. G. Clark, M.D.,

Resident Gynecologist, the Johns Hopkins Hospital.

The most frequent cause of cystitis is catheterization of the bladder without proper observance of aseptic details, in post-operative and obstetrical cases.

The highly concentrated urine excreted for the first few days after surgical operations, especially after the more serious abdominal sections, gives rise to irritability of the bladder and renders frequent catheterization necessary.

A series of observations made by Dr. Russell on the urinary excretion, in the first five days subsequent to cœliotomy shows a great diminution in the normal amount of fluids with an increase in the solids of the urine. If, in addition to this chemical irritant, infectious matter is introduced into the bladder by the catheter, the most favorable conditions are present for the production of a serious inflammation. The rigid technique in catheterization insisted upon by modern surgeons fortunately renders this complication comparatively rare, and the chronic forms of cystitis as a rule date the onset of the attack to a specific infection or a badly conducted puerperium.

The acute forms of cystitis usually yield to treatment if taken in hand at once, by mild vesical irrigations and diuretics, as it is only necessary to eliminate the cause of irritation, which is readily reached by these means, to cause a subsidence in the inflammation.

The method of treatment which I am about to describe is not advised in these simple acute cases; but in the sub-acute or chronic cases it finds its field of usefulness. The unsatisfactory results of treatment of these obstinate ailments by the usual therapeutic remedies are universally acknowledged by all physicians and surgeons.

The late Professor Goodell, of the University of Pennsylvania, in his remarks preceding the details of treatment in chronic cystitis, usually spoke of the extreme persistence of the inflammation and the difficulty of curing it, a statement fully confirmed by the large number of remedies which he afterwards suggested for its treatment.

The one symptom common to all forms of cystitis is frequent and painful micturition, due to expulsive efforts of an inflamed bladder, excited either by a slight distension of the bladder or by the presence of irritant salts in the urine.

If the acute inflammation is not soon relieved the bladder remains contracted, the mucous membrane becomes congested and thickened, new connective tissue is formed in the vesical walls, the rugæ are much more prominent than normal, and the intervening

sulci conceal septic matter which cannot be reached by irrigations, as the moment the fluid begins to distend the bladder such acute pain is produced that the bladder contracts with great force and prevents its even coming in contact with the deeper parts, much less washing away or rendering innocuous the concealed pus. As evidence of this, one can see almost immediately after the most thorough vesical irrigation with a two-way catheter, small quantities of urine voided, highly charged with pus, desquamated epithelium and other degeneration products.

It is to overcome this difficulty in reaching the source of infection that the vesical balloon is especially valuable.

At one of Dr. Kelley's clinics given during the meeting of the American Medical Association, in May, 1895, I exhibited an improvised apparatus, made by attaching a toy balloon to an English catheter, and demonstrated its method of application. Since then special balloons have been made which have proved in every way satisfactory.

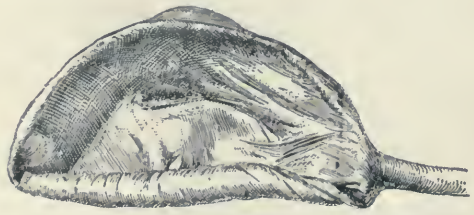


FIGURE 1.

By means of this apparatus the bladder is distended, the rugæ smoothed out and all of the inflamed and infected areas are brought in contact with the vesical balloon, which is employed as the carrier of therapeutic remedies.

Rubber balloons have been introduced into the bladder and inflated preceding the repair of vesical fistulæ, to facilitate the operation, but so far as I am able to glean from medical literature, this is the first employment of such an apparatus for the treatment of cystitis.

THE VESICAL BALLOON.

The apparatus consists of a small balloon made of thin rubber, 6 cm. in diameter when collapsed, connected with a thicker rubber tube 26 cm. in length, with a small cut-off valve or clip to retain the air when the bag is inflated. These balloons can be distended to about the size of a well-filled normal bladder.

We have employed the surgical aspirator as the most convenient means for inflating the balloon, but the small rubber bulbs connected with nasal atomizers, or a cheap air pump like the bicycle-pump, are equally satisfactory.

The balloons are made of delicate rubber tissue, and if not carefully preserved are soon destroyed. They should be washed in warm water immediately after use, and then slightly inflated and allowed to dry thoroughly, in order to prevent the walls of the collapsed balloon from adhering together.

When the apparatus was in its experimental stage we used the oleaginous ointments, which where quickly found to decompose the rubber, and at the suggestion of Mr. Waltz, pharmacist to the Johns Hopkins Hospital, gelatine was used, which at once proved an ideal vehicle for remedies.

Gelatine possesses the advantages of melting at the body temperature and not injuring the rubber, and when brought in contact with the bladder it is quickly absorbed.

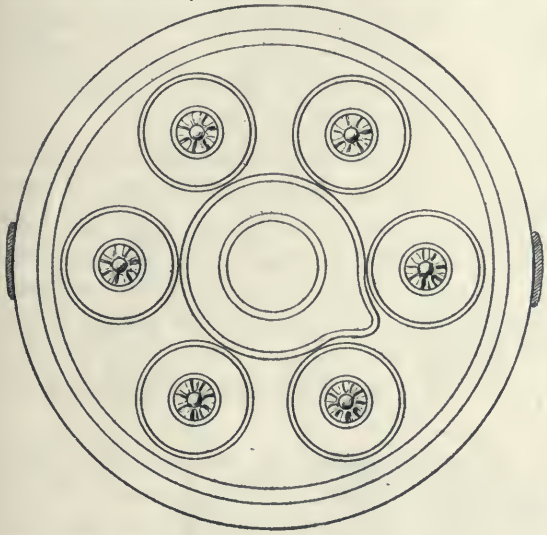
Up to the present time we have found a ten per cent. ichthyol gelatine very satisfactory. In addition to this we have had made up a bismuth, zinc, salicylic acid and bichloride gelatine, but so far have had no occasion to use them.

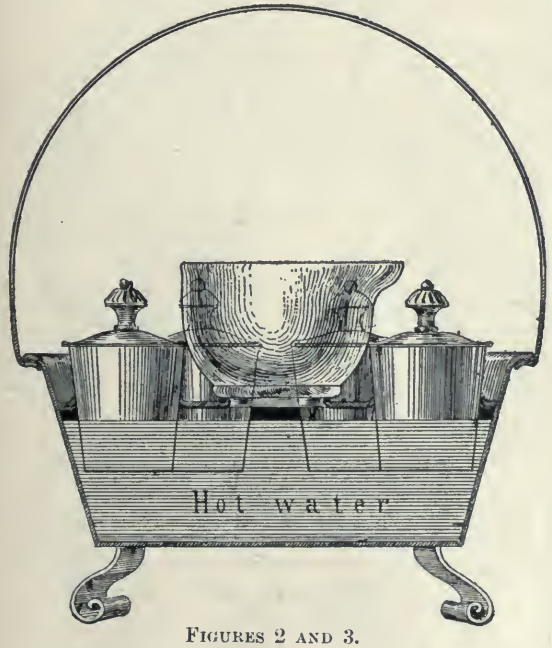
METHOD OF APPLYING THE VESICAL BALLOON.

Before using the balloon it should be boiled and placed in a boric acid solution or sterilized water. The capacity of the balloon should always be accurately determined previous to its use, by inflating it to the size

desired, and counting the number of cylinders or bulbs of air required to fill it.

By observing this precaution there is no danger of over-distending the bladder, as the exact degree of distension is determined by the number of cylinders of air introduced.





FIGURES 2 AND 3.

The external urethral orifice and surrounding parts are cleansed with soap and water and bichloride solution (1 to 1000) by the nurse, after which the bladder is catheterized and the patient placed in the knee-breast posture, carefully protected by a sheet.

The patient should lie with chest flat on the table and her arms hanging over the sides, in order to make the bladder distend perfectly when the speculum is introduced.

A small pledget of cotton saturated with a twenty-per cent. solution of cocaine is inserted into the urethra and allowed to remain for 3 minutes, when the number ten vesical speculum can be introduced without giving the patient great pain. Frequently the patient complains of no discomfort until the end of the speculum impinges upon the inflamed mucous membrane.

Before the patient is placed in position, the gelatine, which has been previously sterilized, is immersed in a water bath and melted. For ordinary use in private practice or in a limited hospital service it is not necessary to have the elaborate apparatus here figured, but a small metallic ointment box is sufficient for all practical purposes.

The temperature of the water bath should be only sufficient to reduce the gelatine to the consistency of cold olive oil, as in this state it will adhere better to the balloon, which can be more easily rolled into the form of a suppository.

Before preparing the balloon for introduction into the bladder the hands should be disinfected. The bag is rolled between the thumb and forefingers in the same way as a hand-made cigarette. Into the concavity which naturally forms when the balloon is completely collapsed the gelatine is poured to overflowing, and the balloon slowly rolled, more gelatine being added until it assumes the form of a suppository well covered with the semi-fluid gelatine. It is now clasped with a long, slender crane's bill forceps, Fig. 4, and inserted into the bladder and released.

Before beginning the inflation it is best to tell the patient that she will experience painful sensations. As the distension progresses the patient suffers considerable pain and an urgent desire to void her urine. By forwarning her of these attendant symptoms she will be able to withstand the pain, and the inflation can be carried up to the desired degree in 3 to 5 minutes.

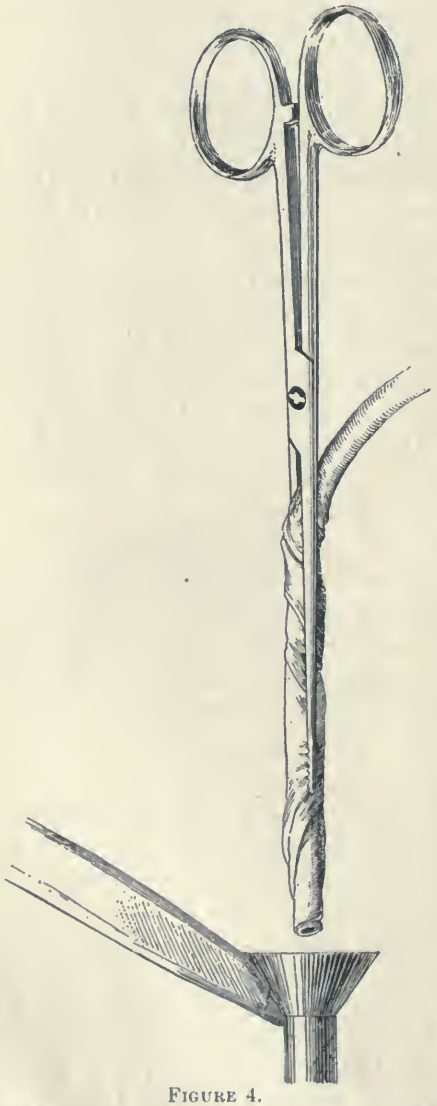


FIGURE 4.

The pain in chronic cystitis is usually severe during the first two or tree applications, but the patient as a rule experiences so much relief subsequently that she is willing to persevere in the treatment.

A rectal suppository of 1 grain of opium, introduced immediately after the treatment, is of great service in alleviating the subsequent suffering. Having inflated the bag up to the required size, the clip on the rubber tube is closed, and the patient then assumes the dorsal or lateral posture.

Our rule is to leave the balloon in place 15 to 20 minutes, beyond which time it does not appear safe, as the ureters are blocked by it. In removing the balloon the clip is opened, when all but a small amount of air escapes; the rest is then aspirated with the air-pump bulb, when the collapsed rubber bag is easily pulled out through the urethra without causing pain.

We have treated at least ten cases with success by this apparatus. A history of one case, of a severe type of chronic cystitis of 13 months standing, well represents the efficiency of the vesical balloon.

CASE OF CHRONIC CYSTITIS.

M. J., admitted 21, 10, 95, colored, aged 35 years, married 10 years, no children, no miscarriage.

Complaint.—Frequent and painful micturition. Hematuria.

Menstrual History.—Menses appeared first at 16 years always irregular, sometimes not occurring for two months. When she was about 27 years old she had a slight discharge every three months.

For the last 7 or 8 years the menstrual flow has ceased and there is no history of vicarious menstruation. She has suffered no inconvenience on this account, and says she is perfectly well with the exception of her present complaint.

Family History.—Mother living and well, two sisters died of phthisis.

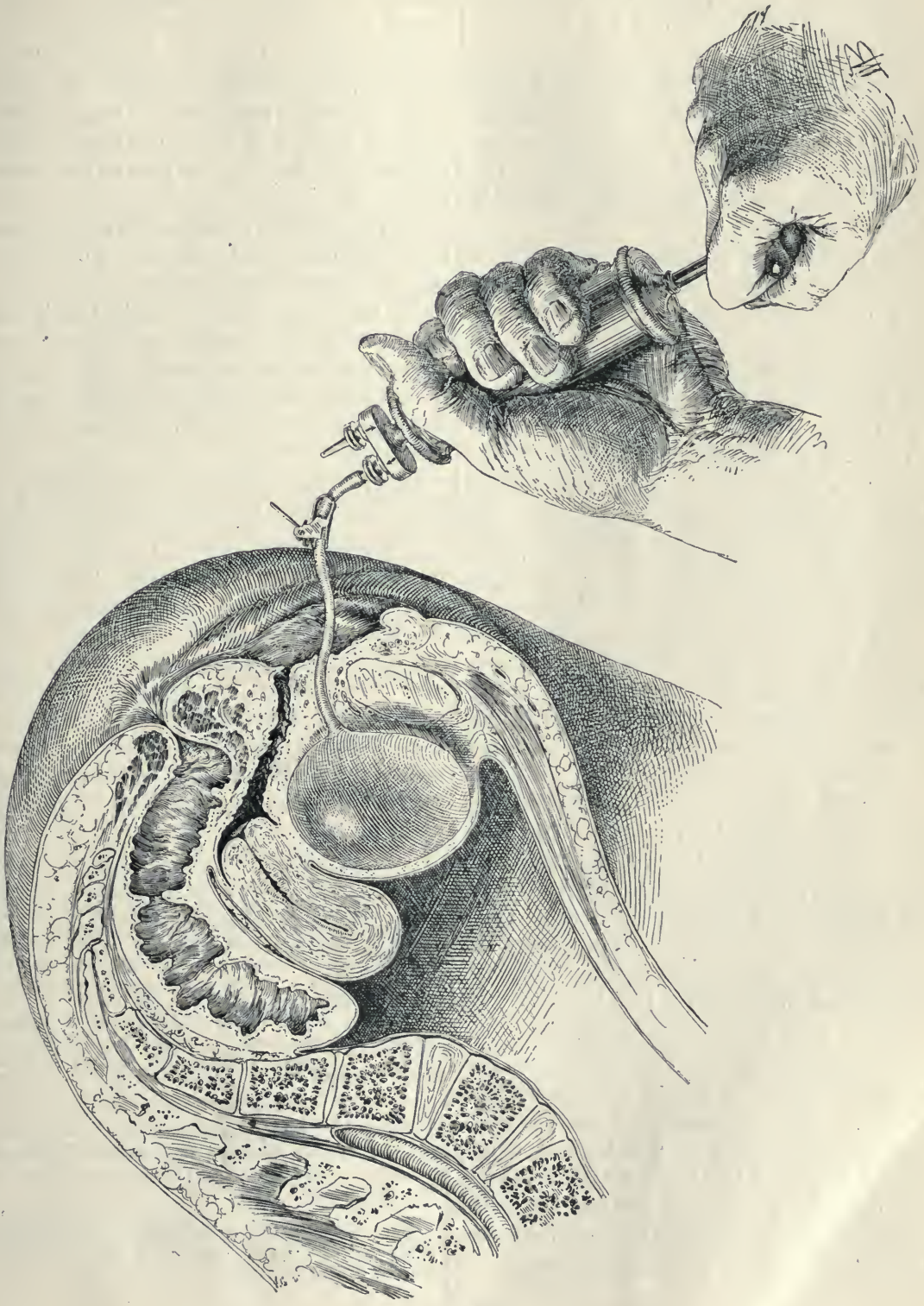


FIGURE 5.

Personal History.—Patient has always been "delicate," but has never had any prolonged spell of illness.

Present Ailment.—About thirteen months ago she began to have slight pain on urination, which grew rapidly worse, notwithstanding the remedies given by her physician. For the last five months blood has frequently appeared in the urine.

The frequency of urination is much greater at night, when she is often compelled to get up 8 or 10 times. She does not think the pain is increased by exertion, but says one week ago when coming to the hospital she had agonizing pain and several blood clots were passed.

There is a constant dull pain over the bladder, which becomes sharp and cutting during micturition. About the time the patient began to experience painful urination she noticed a yellowish vaginal discharge, which was probably of gonorrhœal origin.

Present Condition.—Patient says she has lost considerable flesh since illness began. Defecation painful when bowels are constipated. Frequent and painful urination. When the paroxysms come on the patient has an expression of intense pain.

Examination of Bladder.—Urethra congested and reddened. The vesical trigone is intensely reddened, the rugæ stand out prominently, and over the surface of the bladder are flakes of pus and small blood clots. The area of intensest inflammation is in the inter-ureteric area and gradually shades off towards the fundus of the bladder.

In the areas of greatest inflammation the mucous membrane is of an angry red and bleeds when touched lightly with the ureteral searcher. The capillaries are indistinguishable in this portion of the bladder, and a careful search of the bladder fails to reveal the ureteral orifices. In the less congested areas above the trigone the capillaries are prominent, and at various points small, intensely red clumps or congeries of minute vessels are seen.

The anterior wall of the bladder in many places appears normal.

Treatment.—Application of ten per cent. ichthyol gelatine by means of vesical balloon. Patient experienced great pain at the time of application.

22, 10. Patient greatly relieved two hours after treatment, and still feels much better than before the treatment.

23, 10. Balloon again applied, still very painful; bladder appears less congested and the ureteral orifices are faintly visible. Marked improvement in symptoms; urination much less painful. Patient got up only three times last night.

10, 11. The bladder has been treated every third day since the last note was made, and now appears almost entirely well. The patient no longer experiences any pain between the treatments and thinks she is entirely well. Advised to remain one week longer

11, 16. Patient discharged to-day. The mucous membrane has assumed a perfectly healthy hue, except a slightly increased reddening around the ureteral orifices. No treatment since the last note. The pain is entirely relieved, and the patient got up but once last night to urinate.

NOTE.—Later experience in the treatment of cystitis has proved that the introduction of the fluid gelatine into the bladder by means of a long slender pipette, immediately before introducing, the balloon is of the greatest therapeutic value, as a greater quantity of the medicinal agent is in this way brought in contact with the inflamed areas.

Since the original report of this method of treatment before the Johns Hopkins Hospital Medical Society, a number of long standing cases of cystitis have been treated successfully.

When you have found pus in an exploratory puncture, *never* take out your needle, if the case is one for operation, until the pus cavity has been widely opened.

Examine the urine for sugar in all cases of carbuncle and in all cases of eczema, especially eczema of the genitals.

THE EXPLORATORY INCISION IN ABDOMINAL SURGERY: ITS INDICATIONS AND TECHNIQUE.

By J. H. Carstens, M.D.,

Chief of Staff and Gynæcologist to Harper Hospital; Professor of Obstetrics and Clinical Gynæcology in the Detroit College of Medicine; Ex-President American Association of Obstetricans and Gynæcologists, etc.

Your kind invitation to read a paper on the above subject brings to mind many reminiscences of the past. Many of us remember, or perhaps have taken part in abdominal operations a generation ago. While the surgeon was operating, a mob was waiting outside to lynch him for cutting open a woman's belly. I well remember my first case, nearly twenty years ago. It was a young woman who had severe hystero-epileptic attacks during the menstrual periods. She had been under treatment for a long time, but without benefit. I notified two old and able practitioners to be present at the operation, but when they came to the hospital and found out what it was they left in disgust and said they washed their hands of such operations.

My third case was done in a small city of the State, where I could get no physician to administer the anæsthetic. Only the young doctor who called me, a Methodist minister, with a neighbor woman were present and assisted. The doctors refused to have anything to do with it.

Well, that first case of mine was perfectly cured and I saw her only a short time ago, a healthy wife, and the happy mother of two step-children.

How it took years and years to wean, not only the laity, from the notion that it was a barbarous proceeding, but it also took years to educate the masses of the general profession to the idea, that not only was abdominal surgery necessary in many cases, in order to prevent suffering and prolong and save life, but in very many cases it was necessary, even to make an abdominal section for diagnostic purposes only.

How long it took to prove and have it established as a settled fact, that the average duration of a woman's life, with ovarian tumor, was 2½ years, and that an operation and removal of the growth was her only chance.

We remember that surgeons made mistakes in diagnosis, cut down upon a fibroid tumor and then closed the incision without removing it. But occasionally, one more courageous than his fellow surgeons, would remove a fibroid tumor, and eventually they would remove a bunch of fibroid tumors and a part of the womb by the clamp method. How gradually was the technique of abdominal hysterectomy improved, so that we have to-day, the modern, clean and radical operation of total extirpation.

We remember the abuse and calumny heaped upon the head of Lawson Tait, who asserted that there was no such thing as pelvic cellulitis and that it was a pustule, and could only be cured by removal.

But after more than twenty years, the profession recognizes the fact that so-called cellulitis and pelvic peritonitis are always caused by pustules due to an infection from without. That abscesses in the broad ligament only exist in puerperal cases, from lymphatic infection, caused by a lacerated cervix.

It took years to prove that gall-stones could exist without jaundice and still cause great distress and digestive disturbances.

It took decades to show that nervous reflex disturbances of all kinds can be produced by morbid conditions of various abdominal organs.

What a long struggle was it, and what a long struggle did the abdominal surgeon have, to educate the general practitioner to that point; and to prove to him that idiopatic peritonitis was always appendicitis, that is to say, 96 times out

of 100. And of the four per cent., where it is not caused by inflammation of the vermiform, it is caused by malignant growths, or perforation of the bowel, which require an abdominal section just as much as an inflammation of the appendix. Only recently has the profession recognized the fact that hernias, which often become strangulated, can be best treated by an operation and with almost no danger.

Only within the last few years have operations of colotomy for cancer of the rectum, or gastro-enterostomy for cancer of the stomach been employed, not for the purpose of curing the disease and saving the patient's life, but for the simple purpose of relieving suffering and prolonging life.

So have diseases of the kidney, and especially renal calculi, been attacked by the abdominal surgeon, nor has the latter failed occasionally to remove the diseased spleen or cut off a slice of the liver when occasion demanded it.

To-day, abdominal surgery is recognized as a specialty, and its claims that all pathological conditions in the abdomen are surgical as well as medical has been accepted by the mass of the profession—the moss backs and the fossils are always excepted. Many cases which formerly were treated by internal and external medication are now recognized to be purely surgical.

Furthermore, the sooner that surgical interference takes place the better it is for the patient, not only for his or her life, but for perfect cure and absolute recovery.

The wonderful success of abdominal surgery is due to modern aseptic and antiseptic surgery. With the frightful mortality of the past, success could never have been accomplished. The general practitioner would never tolerate surgical interference when the mortality was so frightful as it was in the past, and very justly so. It is the success of to-day, the death rate being reduced to 1 in 100, and not higher than 15 in 100, according to the class of cases.

Both the abdominal and the general practitioner have grown step by step. When the surgeon has proven to the general practitioner that he could operate safely, the general practitioner has asked for his assistance.

Abdominal surgery, with the success of the past, naturally plunges forward, and it is not satisfied simply with operating on cases where there is palpable morbid conditions, but insists that in complicated and obscure troubles, an abdominal section for diagnostic purposes only is indicated. In other words, that abdominal surgery should be used, like the thermometer or the stethoscope, for the purpose of diagnosing cases. Of course not those simple, ordinary, every-day cases, which can be correctly diagnosed and treated, but in all the complicated and obscure and serious cases. By serious cases I mean those where the patient has some abdominal ailment and becomes anæmic, weak, and steadily grows worse in spite of treatment.

The vast majority of cases can be diagnosed with the ordinary methods generally employed, but occasionally we come across some abdominal trouble which causes the patient a great deal of distress, often threatens life by steady progress, and we cannot diagnose the case. Here, abdominal section is indicated. When the patient is subjected to an ordinary course of treatment, has been seen, and perhaps treated, by a number of able practitioners, without success, then an exploratory operation will clear up the diagnosis. Sometimes even, an operation can be performed at the same time and the patient be relieved. There is generally some particular point of severe pain where the seat of trouble is, and an incision should be made, as near to this point as possible.

I have now a young man, 17 years old, in Harper Hospital, operated on 10 days ago. He has been suffering for six years with abdominal pain to such an extent that he was often obliged to leave school; and since he has been learning a trade, he has frequently been obliged to stop work at any time during the day and go home. In a day or two he would be better and resume work, to be soon again disabled. For some months he has been unable to do any work; he lost flesh and became weaker. He has been treated by a number of able practitioners with only temporary benefit. A year ago he had an acute attack of jaundice, which, however, only lasted about ten days. The pain was principally noticed on the right side from the region of the liver down to the right inguinal region. What was it? I could not tell. It might

be disease of the appendix ; it might be gall stones, perhaps only adhesions. I made an exploratory incision, cutting down on the right outer edge of the rectus. I started my incision from a line drawn from the umbilicus to the crest of the ilium, upwards for two inches. This enabled me to reach up to the liver, explore the gall bladder, the stomach, the kidney, and also downwards to the cæcum. There were no gall stones or any adhesion or abnormal condition of the stomach and intestines. The appendix, however, was twisted, adherent and strictured at its junction with the cæcum. I increased the incision downwards for half an inch and removed the appendix. He made an ideal recovery ; all his symptoms have disappeared, and I am fully convinced that all his trouble originated from catarrhal appendicitis, although there was no McBurney's point or any marked pain in the region of the appendix.

Two months ago, a lady, aged 45, was sent to me from Lower Ontario, who had obscure abdominal trouble. She was suspected of having ovarian and tubal trouble, but on careful examination I could find no trouble of the generative organs. The trouble seemed to orignate from some point around the liver and duodenum. Her history strongly pointed to the possibility of gall stones. I made an exploratory operation and found extensive adhesion of the intestine to the liver and the abdominal wall ; no organic trouble whatever, and no gall stones. These adhesions were carefully separated, sprinkled with aristol to prevent re-adhesion, and the abdominal incision closed with a tier of Kangaroo sutures. She made an ideal recovery, and the wonderful improvement in her condition was marked before she left the hospital. In this case I made an incision at the right outer edge of the rectus just below the ribs, the kind we ordinarily make when operating for gall stones.

Another case to illustrate this case was a patient who came to me from an interior town of the state, with stomach trouble. He had been to Southern France, the Engadine of Switzerland, and had drunk the waters of Carlsbad, all without benefit. He had a pain just below the ensiform cartilage, and more or less digestive troubles, sometimes vomiting. He had had his gastric juices examined and the stomach washed out, used electricity, and had taken gallons of medicine, but steadily became weaker. I carefully examined him, but could find absolutely nothing requiring surgical interference, so dismissed him. He took another trip to Europe, visiting various medical centers, and returned home, becoming rapidly worse, with vomiting, and died. Post mortem examination was made and revealed stricture of the pyloric end of the stomach. It was not malignant, I am informed, and I have no doubt if I had had the courage and proposed an operation he would gladly have accepted it. I could have made a re-section or a gastro-enterostomy, and I verily believe he would have been well and living to-day. We are all cowards sometimes and this case has taught me a good lesson. Hereafter such cases will be subject to exploratory celiotomy. Even if nothing is found, there is no loss and the patient at least has the assurance that there is no organic trouble.

Years ago an old friend of mine was ailing and was treated by many physicians and also called on me. I made the most careful, repeated examinations, but could not diagnose the trouble, and in those days the students called me a crank on differential diagnosis. His urine was repeatedly and carefully examined, but nothing could be found abnormal, although the normal constituents varied at different times. All his trouble was attributed to the stomach and the liver. After ten years he died. I made a postmortem and found in each kidney an immense stone shaped like the pelvis. That was the only thing that could be found. If I had such a case to-day I would make an exploratory abdominal section, and in a few minutes would know that he had no organic trouble of the stomach or liver, but had a stone in the kidney which could be removed.

These few cases I just relate as illustrations. I could increase the number, but there is no need of it, as I simply want to call your attention to the fact that there are many complicated, obscure abdominal troubles which do not yield to medical treatment, but which can be relieved by surgical means.

You ask me to give the indications. The above cases indicate the kind, I would say ; all those

cases where the diagnosis cannot be made, where a number of physicians disagree, and treatment is of no benefit. To this belongs, especially class all cases of abdominal dropsy which are not due to diseases of the kidney or marked disease of the liver. Abdominal dropsy is frequently due to tubercular peritonitis, and 85 per cent. of cases of tubercular peritonitis are absolutely cured by surgical interference. But if cases of this kind are allowed to progress until a secondary deposit has taken place in the lung, tubercular peritonitis may be cured, but pulmonary tuberculosis will go on unchecked and then end in the death of the patient.

The signs and symptoms of diseases of the female generative organs, and our ability to make correct diagnosis by conjoined examination and palpation would virtually exclude pelvic diseases from this paper. I refer to that class where all the trouble is above the true pelvis.

If you ask me what the symptoms would be, I cannot tell, because the symptoms would vary with the trouble. It seems to me that the principle ones are the disturbances of the stomach, occasional spells of vomiting which increase in frequency, sharp coliky pains in a certain part of the bowels. If there is a stricture, or any other thing, causing a diminution in the size of the intestine, gas, when it reaches this spot, will generally cause an excessive distension of this part of the bowels, hence pain; and patients are very often able to localize it and will tell you that the gas rolls around, and when it reaches that spot then they have pain and distress. That, to me, is a very suspicious symptom.

Strictures in the descending colon can be generally diagnosed absolutely without an operation, although the latter may be necessary to relieve the trouble.

I have so far spoken only about chronic cases, as I think it hardly worth while mentioning that naturally, all acute cases of inflammation of the peritoneum, and all acute cases with symptoms of obstruction of the bowels, as indicated by constant vomiting, etc., require the most prompt surgical interference.

In the former, as well as in the latter, class of cases, the thermometer is of no avail so far as I can see. I have seen cases of gangrenous appendicitis causing purulent peritonitis with a temperature of only 99 or a little over. It seems to me that the pulse is of more diagnostic importance than the temperature. If that becomes increasingly rapid and feeble, it indicates serious trouble. I assume, of course, that common, simple ailments, acute attacks of indigestion or chronic colic (except lead colic, which sometimes requires an operation) neuralgia, muscular rheumatism, etc., are excluded from the class of cases to which I refer.

You want me to write about the technique. In the present state of our knowledge this has not been settled. I do not know of anything having been written particularly on this question, but from my own experience, I have made it a rule to cut down as near as possible on the place where I think the trouble is located. I will stretch a point and cut down in the median line because there is less hæmorrhage there and better chance for union. If the trouble seems to be on either side, I cut down on the outer edge of the rectus, as I do in operations for appendicitis. I do not like to cut through the rectus muscle or transversely across the oblique muscles; first, because there is constant oozing from the injured muscle; second, the lacerated tissue is soft and is more liable to infection than fibrous tissue.

Whatever point I select, I make the opening small, say about two inches, as I can always enlarge it, if needed, with one stroke of the knife, pass through the skin and all the fatty tissue, if possible, down to the fascia, and with one or two strokes of the knife, through the latter down to the peritoneum. I lift it up and may nick it and enlarge the opening with the knife; sometimes I simply stick my finger through the peritoneum and explore it with my finger first, increasing the peritoneal opening, if necessary, later on. In my incisions in the median line I pay no further attention to the peritoneum. If, however, it is at the outer edge of the rectus, I have found that great retraction takes place on each side, and it is very difficult to get hold of the peritoneum when you want to close your incision. In the latter case I catch hold of the peritoneum on each side with a pair of catch forceps, so that it cannot slip away, and after the exploration or the operation is finished, I have it where I can easily sew it up.

If it is a nice clean case, without sepsis, I sew up the peritoneum with a running suture of Kangaroo tendons. Then I take the fascia and muscles in another layer of suture, the fat also if necessary, and at last the skin with a very fine suture, using the buried Kangaroo tendon in layers, as I have described repeatedly. In all infected cases, including tubercular trouble, I use the *en masse* suture of silkworm gut.

In conclusion I would say :—

1st. Obscure abdominal troubles require exploratory celiotomy. No honest physician can do justice to his patient by simply treating abdominal troubles symptomatically. Every honest general practitioner, in justice to himself and his patient should call in an abdominal surgeon as counsel.

2nd. An abdominal surgeon should be prepared to do any operations whatever, when he does an exploratory operation. Hence, an exploratory operation should be done in a well equipped hospital only.

3rd. The exploratory incision should be made in the medium line, if possible, or the outer edges of the rectum. The fleshy parts of abdominal muscles should be avoided as much as possible.

4th. In clean aseptic cases the buried Kangaroo tendon or catgut ligature in tiers should be used. In all septic cases, including tubercular peritonitis, sildworm gut, silk or silver wire, *en masse* suture should be employed.

Rules for the surgeon to observe in order to prevent the absorption of poison during operations on septic patients : 1. After the hands and arms are made aseptic, dip them in strong ammonia water, or in a saturated solution of oxalic acid. This procedure will instantly reveal to the surgeon the least abrasion of the skin from any cause. 2. All small abrasions, or separations of continuity of skin, should be painted with flexible collodion, and immediately covered with a few fibres of absorbent cotton. Dry this dressing quickly with heat from alcohol lamp, and again paint with flexible collodion, and dry in the same manner. Then sterilize finger in 1 to 100 bichloride solution. 3. If the wounds are on the joints, apply a strip of adhesive plaster over the cotton and collodion dressing, passing the plaster quite around the finger, at least twice. Fasten this dressing securely with thread. Or, instead of the adhesive plaster, draw on a rubber cot or glove. Sterilize finger or hand and dressing in 1 to 100 bichloride solution. 4. If the hand or finger is wounded during an operation, stop long enough to place on the wound a drop of saturated solution of carbolic acid, or lysol, or creolin, or touch it with a nitrate of silver point. Cover the wound with a small pledget of absorbent cotton, well saturated with carbolized or creolin water, and cover this cotton thoroughly with adhesive plaster. Fasten this plaster securely with thread. Sterilize the finger and dressing by immersing it in 1 to 100 bichloride solution, and proceed with operation. 5. Remember that your health is, or should be, as valuable as the patient's, and that if you have a good assistant to watch the patient, five minutes' time given to dressing your own wound will make no appreciable difference in the result of the operation you are performing.—*Horace T. Hanks.*

Hydatidiform Mole and Malignant Deciduoma.—Fraenkell (*Archiv f. Gyrak.*) has recently added to our knowledge respecting the malignant changes which sometimes take place in the uterus after gestation. Undoubtedly malignant deciduoma is often associated with hydatidiform mole. Small portions of a mole of this class usually remains behind after the greater part has been expelled. The superficial epithelial layer (syncytium) of the chorionic villi proliferates considerably when a vesicular mole develops. It is precicely from this abnormal development of epithelium that the cancerous change known as malignant decidumo is evolved.—*Indian Lancet.*

Chronic Inflammation of the Urethpa Complicated by old Stricttre.—Arthur Aulad, M. D., M. B., Ch., B. A. O., B. A., Rathmines, Defoe Road, London, S. W., England, says : "I have very great pleasure in testifying to the extreme efficacy of Sanmetto. The only case in which I have used it was what I would call a test case, viz : one of inflammation of urethra of long standing, complicated by old stricture. I gave it in drachm doses three times a day, and in four days the patient was completely relieved."

SURGERY

IN CHARGE OF

GEO. A. BINGHAM, M. B.,

Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children. 68 Isabella Street.

HOW TO AMPUTATE.

BY JOHN A. WYETH, M. D.

In every amputation the preservation of the life of the patient is the first great principle to bear in mind; the second is to preserve the greatest amount of usefulness for that part of the member which is left with the body. Since hemorrhage is the chief fact of shock, to prevent loss of blood is essential. Practically, every amputation should be governed by these laws.

When hæmorrhage has not occurred before the case is in the hands of the surgeon, this element of danger may, thanks to modern surgery, be eliminated. There is not an amputation, from the fingers to the shoulder-joint, or from the toes to the hip-joint, in which hæmorrhage cannot be eliminated as a factor of danger to the patient's life. And even when extensive bleeding has occurred before amputation is undertaken, the introduction of hot salt solution into an exposed vein, or in a vein at the bend of an elbow, does much to eliminate the great danger of shock from hæmorrage. Therefore, beyond the saving of blood and of as much of the limb as is possible, I have never practiced any fixed rules as to *how* to amputate. Even in the formation of flaps we should make the flap always with the view of saving as much as possible of the limb. With a single exception, I have considered the tarsus and meta-tarsus as a single bone, paying no attention to joints, taking only the precaution to remove any thin film of bone or cartilage which might still remain when the saw passes the articulations. The only exceptions to this rule are (1) in the matter of an amputation at or near the ankle-joint. From experience I am convinced a better degree of usefulness can be obtained by a properly adjusted artificial foot to the stump of a Symes' amputation, than to one which saves either a portion of the os calcis (Pirogoff), or when part or all of the astragalus is left in (Hancock). From the ankle to the hip, the same conservative idea should prevail, unless (2) the line of the saw passes within one inch of the knee-joint, or (3) above the trochanters. In these conditions, it is conservatism to remove the upper end of the tibia and amputate at the knee-joint to enucleate the head of the femur. In amputations of the hand, the preservation of as much tactile sense, together with as much of the member as possible, should be the rule. This should hold, especially in the case of those who use the hand in any avocation. In certain cases of those who do not labor, amputations which sacrifice even more of the member are justifiable. For example, a more shapely hand is often left by the removal of a portion of the metacarpal bone with the finger.

In the effort to prevent loss of blood in an amputation, it may not be always essential to success to force out all the blood that is in the member to be sacrificed. When the quantity of blood is normal, or nearly so, and there has been no hæmorrhage and the patient is in good condition, the sudden crowding of the blood that may be in the limb, such as the lower extremity, into the remaining vessels, may put a strain upon the heart that will produce a serious result.

Of the seven hip-joint operations that I have performed by my own method, the only case I lost was that of a young man, about nineteen years of age, with a sarcoma of the knee. Estimating all the blood that ran out of the wound from the leg, he did not lose in all more than five ounces. The pulse was full and bounding after he was put to bed, and it seemed to me that it was one of the most favorable cases I had had. I left the patient in the hands of an assistant and went to the country; the man went into shock about three hours after the operation and died without ever having reacted. His kidneys were normal; the anæsthetic given was ether, with an Ormsby inhaler, and the quantity was very small. He died, in my opinion, from heart fatigue. The strain on the heart muscle, especially the right side, was too great, and it quit work.

In emptying the member of blood, elevation of the extremity will cause the greater part to gravitate into the vessels of the trunk. In anæmic cases, application of the Esmarch bandage from the periphery almost to the location of the disease,

skipping over this and again applying it above the seat of lesion, will entirely exsanguinate the member, with the exception of a small quantity of blood which may be contained in the diseased portion.

When, as in an amputation at or near the ankle-joint, a rubber tourniquet is applied to the thigh, care should be taken to use a wide rubber band and not a rubber tube, since the accumulative pressure of the rubber tubing is sometimes great enough to injure the nerve. I have seen paralysis follow in several instances as a result of traumatic neuritis caused by the tourniquet.

In high amputations near the shoulder or hip, this objection does not prevail, since pressure on a nerve is immaterial at that point.

In Symes's amputation, I have modified the incision, and carry it from the tip of the malleolus on either side directly downward, parallel with the axis of the leg. In this way the blood supply to the flap, especially on the inner side, is not interfered with (as demonstrated by myself in 1876), which was often done when the incision carried obliquely backward, as advised by Gross and other older surgeons. Professor Stephen Smith pointed out the clinical fact that sloughing of the inner side of the flap occurred in a considerable proportion of cases, and my dissections demonstrated the fact that the oblique incision divided the posterior tibial at or near its bifurcation, and that the chief blood supply at this part of the flap came from the extrnal plantar branch of that artery and from the posterior tibial at the bifurcation; and that it was important, therefore to leave at least a half or three-quarters of an inch of the external plantar artery intact. The pocketing of the flap is not objectionable and can be in great part remedied by making a much shorter anterior flap, the lines of the incision being well above the level of the ankle-joint. I have discarded in general amputations of the leg or arm, any method looking to obtain a long posterior and short anterior flap (Teale), with the idea of bringing the cicatrix away from the end of the stump. I have always held that a circular skin flap, with or without a lateral incision as the emergency may demand, is the ideal flap, the muscles being dividend a inch or more above the level of the circular incision through the skin, and the bone sawed on a level with the muscle. Dissection of the periosteum from the end of the bone in order to secure the periosteal flap, is entirely unnecessary and should not be done.

In certain cases of amputation, when osteomyelitis has prevailed, it was thought that the surgeon might be called upon to carry his amputation high up, close to the shoulder or hip-joint, in order to get above the disease in the bone. This is not good surgery, for the longer limb, the more useful to the patient, and bones that are the seat of osteomyelitis can be readily cured, provided the canal is opened even near the knee or elbow-joint, and the bone carefully curetted up to the canal. The insertion of a drainage-tube, through which aseptic irrigation is made every day or two, and the *gradual* withdrawal of the tube, will cure the disease in the bone and leave the stump long and useful. I have, in several instances carried out this plan with invariable success.

One other point has been of great service to me in effecting rapid amputation. When making a hip-joint amputation, or an amputation through large masses of muscular tissue, after tying large arteries, such as the two femorals and the circumflex branches, in order not to lose time that is usually spent in applying forceps to oozing surfaces, I pass deep catgut sutures through great masses of muscle all the way across the whole cut surface, and tie these firmly. In this way the muscles are brought together and compression exercised which prevents bleeding. Ten or fifteen minutes can be saved by this practice in an ordinary amputation. In the last hip-joint amputation I did by the bloodless method, although I made no effort at haste, the operation was done, the vessels tied, and the disarticulation completed in twenty-five minutes, the tourniquet still remaining on until the wound was ready to be closed by sutures. In this amputation I now apply the tourniquet higher than at first advised. Experience has taught me that complete control of hæmorrhage can be obtained by carrying the strong white rubber tubing close in the crotch, where it is held by the inner pin, while the other pin is so inserted that the tube passes in the notch just below the anterior superior spine of the ilium, from which the sartorius muscle originates. In this way the pressure is entirely above the level of the hip-joint, the capsule can be opened, and disarticulation rapidly effected without any attention to the tourniquet. If the tourniquent is not tightly applied when the bone is removed and the rubber tubing is slackened by diminished resistance, there may be some slight dripping from the vessels in the posterior part of the flap, but this is immaterial and can be immediately controlled by pressure with the fingers and the application of artery forceps.

It is not necessary to emphasize to this Society the point that in amputating for malignant disease, it is the better surgery to get just as far from the lesion as possible, shaping the flap to meet this object.—*The International Journal of Surgery.*.

WHEN SHALL WE TREPHINE?

BY W. L. BUECHNER, M. D., YOUNGSTOWN, O.

Fractures of the skull have always been considered among the most dangerous injuries the human body can suffer, and accordingly we find already in the most ancient times a strong effort to remove the danger of such injuries by surgical interference. The operation performed for that purpose "trepanation" was well known to ancient surgeons.

Hippocrates gives in a clear and concise manner the indications for the operation, and the perfection of his instruments and his technique are astonishing. Celsus, Galen and Heliodor improved the technique of the operation. After these men had passed away surgery underwent a stage of decay, and the operation was forgotten, the Arabs being probably the only people who preformed it. Abulcasis speaks about the operation and recommends it, but never preformed it on a living subject. Avicenna did.

Guido de Cauliaco revived the operation, and gave the same indications for its performance as his predecessors. Berengarius, who lived at the same time—in the 17th century—trephined in every case of fracture of the skull. The operation now became rather popular and was performed by Parè, Lange, Hildanus, Mariano Santo and others. Marc Aurel Severinus and Dominicus de Marchellis trephined for insanity, epilepsy and even chronic headache. Heister—1750—is very cautious, giving the indications for the operation, he says, it should never be performed without urgent necessity and as an ultimum refugium, of which the ultimate result could never be predicted. Petit — 1787 — first described the difference between concussion and compression of the brain, and considered the latter the principal danger of injuries of the skull, and he trephined, to avoid it. Potts—1787—thought the danger was due to contusion of the cranial bones and dura mater and the subsequent suppuration under that membrane, therefore he trephined to give the pus a free exit.

For several decades trephining was done in a rather promiscuous way, and it took the authority of a Desault, to check this trepanation mania. He only advocated the operation in cases of severe compression. For many years the most preminent surgeons were divided on the question of the advisibility of the operation. Le Dran, Quesnay, Sabatier, Louvrier, Mursinna, Rust, Boyer, Zang, von Klein, von Walter, Beck, Blasius and Sedillot advocated Pott's idea, to trephine for every fracture of the skull.

Desault's followers were such men as: Schmucker, Richter, Bell, Abernethy, Brodie, A. and S. Cooper, von Kern, Richerand, Dupuytren, Malgaigne, von Graefe, Langenbeck and Textor.

Astley Cooper condemns the operation strongly in subcutaneous injuries of the skull, admits its usefulness in some cases of compound fractures, but warns very emphatically not to injure the dura mater. He says: "When you preform this operation, there is only one step, a very delicate texture, between your patient and eternity, injure that membrane and in most cases death will follow." Richter and Dupuytren held about the same opinion. Malgaigne says: "It is my full conviction, that the whole teaching of the necessity of the trepan is a lamentable error, which has lasted many years and sacrificed even in our days too many human lives." Dieffenbach says, for many years he was more afraid of trepanation than of the head injuries, and in most cases he considered the operation a sure means of killing the patient. In many hundred cases, where he did not trephine, he lost but few patients, while he lost a majority of the cases where he operated. Stromeyer only consents to the operation under two conditions: To remove foreign bodies or to evacute the pus of a surely diagnosticated and located abscess of the brain.

Bruns says: "Trepanation is indicated in all cases where it becomes necessary to remove from the cranial cavity or its walls a substance, which has either mechanically or chemically a detrimental effect on the brain or its membranes, when that cannot be done by milder and less dangerous means, and is there is a probability that the patient will succumb, if the damaging influence is not removed, and if no other injuries or morbid conditions exist, which would in all probability kill the patient, even if trepanation should be successful."

Gross, Agnew, Ashhurst and many other American surgeons advocate the operation.

We rather agree with Bruns' views as to the proper indications for the performance of the operation, and would consider it necessary to operation:

1. In any fracture of the skull, either simple or compound, where there are symptoms of intracranial mischief.
2. If there is **much** localized depression, indicating the probablity of either immediate or remote evil consequences.
3. In all cases of punctured fracture.
4. For the removal of foreign bodies.
5. In cases of compression of the brain from blood, pus or tumor, where the offending cause can be located with a reasonable degree of certainty.
6. In cases of epilepsy, where the traces of the injury originating the disease can be recognized.

—*The International Journal of Surgery.*

TREATMENT OF FRACTURE OF THE PATELLA WITH CONTINUOUS EXTENSION AND WITHOUT CONFINEMENT TO BED.

BY JOSEPH D BRYANT, M.D., NEW YORK.

It is not my intention to call to notice anything essentially new, nor to make any portentious claims of the great benefit to be derived from giving heed to what may now be said regarding the subject of this paper. However, it is the intention of the writer to renew suggestions already made by him some time since bearing on the questions of personal comfort and the proper physical status of patients who are suffering from fracture of the patella, and who for any reason are regarded as improper subjects for operative procedures or for continuous confinement in bed.

About three years ago this method of treatment of fracturef o the patella was presented to the attention of the profession by the writer, along

FIG. 1.—1, Plaster-Paris applied to leg; 2, upper part of splint resting against lower fragment 3; 3, lower fragament and line of fracture.

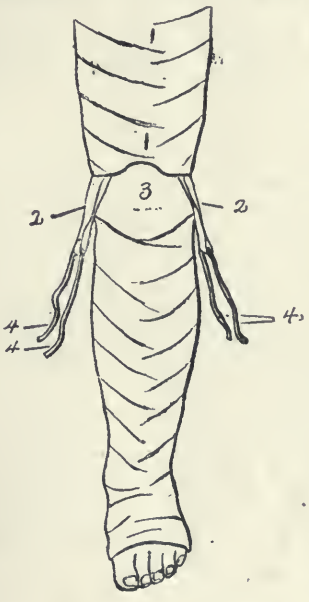


FIG 2.—1, 1, Extension applied to thigh; 2, 2, front view of extension straps; 3, fractured patella; 4, 4, rubber extension.

with a statement of the results in nine cases thus treated. Since that time several additional cases have been added to the record. It appears to me that I can do no better now than to describe again the method of application of the apparatus. In doing so, the verbiage of the previous description will be employed very largely, indeed—amended, of course, here and there by suggestions and modifications that are the legitimate product of a greater experience. The application of the mechanism can be properly divided into four steps:

First Step (Fig. 1).—This step consists in the application to the leg of a plaster-of-Paris splint extending from the bases of the toes up to and partly surrounding the lower fragment of the patella (3, Fig. 1). The plaster casing is applied closely to the leg at a time sufficiently in advance of the succeeding steps to permit of its becoming thoroughly hardened. The upper and anterior border is carefully shaped so as to hold the lower fragment of the patella in proper position.

The functions of this splint are threefold: (1) It affords ample protection to the foot of the patient from the effects of the pressure of the rubber extension which passes across the sole from side to side. Practically the extension acts on the tissues of the thigh from the sole of the foot. (2) It confines the lower fragment in position at the outset and it is maintained there by the upward pressure of the splint, due to the force of the elastic extension as it passes across the sole of the foot (Figs. 1 and 4). In any event, the pressure of the splint at this point can be easily regulated, either by cutting away or padding it at the border contiguous to the lower fragment. (3) It gives proper support to the lower extremity of the extending-brace of the apparatus (Fig. 4).

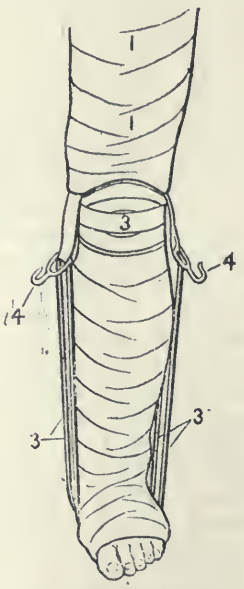


FIG. 3—Front View of Extension.

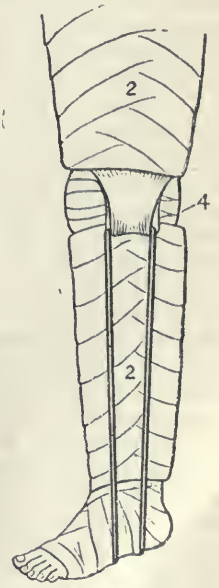


FIG. 4.—Side View of Complete Apparatus.

Second Step (Fig. 2).—The measures of the second step are quite as strongly expressed by the illustration depicting it as words can define them. It consists in the application to the thigh of an adhesive plaster extension fashioned after the manner of the well-known Buck's extension, which in this instance reaches from the perineum to the upper border of the upper fragment (Fig. 2, 1, 1). The adhesive-plaster element of the Buck's extension is at that time held in place by the application of an ordinary roller, as usual. The plaster terminates in the form of loops at either side of the limb a little below the knee. The rubber extending-cords are passed through the loops (Fig. 2, 4, 4) or attached to hooks connected with them (Fig. 3, 4, 4). Moderate extension is then made on the loops by the elastic cords, to draw downward as far as proper the superficial soft parts of the thigh and the upper fragment of the patella. While extension is thus being made, the thigh is encased in a plaster-of-Paris splint reaching from the upper limit of the adhesive plaster down to the upper fragment (Fig. 3, 1, 1), where it is so fashioned and padded as to hold this fragment as nearly in contact with its fellow as possible.

The objects of this plaster-of-Paris addendum are: First, to aid in holding the adhesive dressing of the thigh in as firm position as necessary; second, to afford a support for the upper end of the posterior extending-brace already mentioned; third, to coaptate the tissues of the thigh, thereby exercising a controlling influence over muscular contraction; fourth, the making of direct extension on the quadriceps extensor, by reason of the close application of the splint to the upper fragment of the fracture and the tissues contiguous to it.

Third Step.—This step consists in placing the posterior support or brace in proper position and fixing it there by means of plaster-of-Paris rollers carried around it and around the upper and lower segments of the splint where they lie in contact with each other (Fig. 4). These bandages should hard quickly, and thus incorporate the posterior support at the upper and lower ends firmly with the plaster-of-Paris structure at these situations (Fig. 4, 2, 2). A strip of wood about two inches in width, an inch and a half in thickness, and of sufficient length, placed parallel with and close to each other, will meet the demands of a support.

Fourth Step.—This step consists in drawing together the fragments of the patella as firmly as possible, either with adhesive strips obliquely applied, as is commonly done for this purpose, or the attainment of the object by means of a knee cap suitably constructed and applied to meet the same ends. If strips of adhesive plaster be employed, they are fastened in place by attaching them to the uncovered parts of the posterior support (Fig. 4, 4,). If the knee cap be used instead, it is applied without reference to this support. In applying the plaster strips at the line of junction of the fragments, care should be taken or the strips will be drawn between the fragments and thus interpose an obvious obstacle to proper repair. The hamstring tendons should be properly padded, so that neither the adhesive strips, the knee cap, nor the leather collars of the text-books can cause pressure or chafing of them. And, too, either of the above agents can be more readily and serviceably applied if the extending force be drawn aside to permit of greater room and more careful application. After the apparatus is comfortably in position, the patient is permitted to walk about with the aid of crutches, the limb meanwhile being supported in an advanced position by the agency of a sling carried beneath the sole of the foot and around the neck of the patient.

The apparatus should be made as light as is consistent with proper strength and service. In fact, it is not always necessary to embed the posterior support in the plaster-of-Paris by the addition of more of this material; but, instead, the posterior support may be bound in position by a firm roller bandage applied at either extremity of that structure. The adhesive plaster strips aid also in holding the posterior support in position.

I will not detain you by narrating the various changes that can be made in the utilization of individual elements of the apparatus, as these will be apparent as the circumstances suggesting them shall appear. Thus far thirteen cases of fracture of the patella have been treated under my observation by this method. The results from the treatment are equal in all respects to those obtained by other mechanical non-operative measures. The plan is presented not as a substitute for operative measures, but as an adjunct to them, as the patient can, with this appliance, be about without special danger or discomfort after wiring, etc., and closure of the wounds of the soft parts. The idea is to accomplish, without long confinement in bed, a cure that is equal to one ordinarily attained only by the sacrifices incident to such a confinement.—*Med. Rec.*

Never operate for chronic tumor without having tried anti-syphilitic remedies for at least a week. Many growths supposed to be beyond surgical skill, fairly melt away under the benign influence of mercurial ointment or iodide of potassium. This clinical test is far surer than the microscope.

MEDICINE

IN CHARGE OF

N. A. POWELL, M. D.,

Professor of Medical Jurisprudence, Trinity Medical College ;
Surgeon Out-door Department Toronto General Hospital ; Professor of Principles and Practice of Surgery, Ontario Medical College for Women. 167 College Street.

THE CAUSE OF DEATH OF PROMINENT PERSONS.

BY RALPH S. MICHEL, M.D., SPRINGBORO', OHIO.

A curious incident attaches to the demise of a friend. When "the rider of the pale horse" stops at the house of a friend, we seldom fail to inquire the cause of death. Death is to us so deep a mystery. It changes a being full of energy and life and hope, into an inanimate object, with a rapidity that is appalling. We stand aghast in its presence. The friend, whose welcome smile we meet to-day, is dead to-morrow. We eagerly inquire the cause. So it seemed to me that it would be of interest to make a collection of facts in regard to the death of celebrated persons ; those whom we have learned to know and love from their written pages ; and those whose deeds have moved men's hearts in the times in which they lived. It is impossible to ascertain the cause of death in many instances. Diagnosis has acquired a degree of accuracy but very recently. In many cases the cause of death is given as "fever," which is indefinite. And often the cause is unknown or not stated. The following, however, is believed to be reasonably accurate.

Early in the spring of 1616 Shakespeare and his boon companions, Ben Jonson and Michael Drayton, spent the evening at a tavern at New Place. All became too much intoxicated to reach home, and laid out all night on the ground. The consequence was to Shakespeare a "fever" of which he died in a few days. It was undoubtedly pneumonia.

Lord Bacon died at 65, a martyr to science. While riding one winter day, it occurred to him that snow would preserve flesh, as well as salt. Accordingly he alighted, bought a hen, and stuffed it with snow, at which operation he became much chilled. He was too sick to return home, but stopped at the house of a friend. Their kind hands put him in a cold damp bed—the "best room" perhaps—and he died in a few days. Probably pneumonia.

Burton, author of "The Anatomy of Melancholy," believed in astrology. He calculated by the stars the time of his death. He died at the time assigned, but was suspected of taking something to hasten it in order to make it conform to his calculation.

"O Rare" Ben Jonson had several attacks of apoplexy. As a consequence his mental faculties became much impaired. His last days were dark and gloomy.

Ben Franklin had gout ; also cystic calculus, and the attendant inflammation of the bladder confined him to bed for a year. He was then 84. The immediate cause of death, however, was abscess of the lung.

Washington died at 67, of acute laryngitis, complicated with œdema of the glottis. On December 12, 1799, he rode over his estate on horseback. It was a day of rain and sleet, and he became thoroughly chilled. He contracted a severe cold, and at the end of two days was very sick. Before sending for the doctor he had his overseer to bleed him. When the doctor came he bled him again. Still there being no improvement a consulting physician was called. They bled him again. Being no better, they gave him tartar emetic and calomel. They also applied fly blisters to his throat. The medical treatment has been the subject of much criticism.

Edward Gibbon, the historian, had the largest hydrocele on record—as large as a bucket. Repeated operations for relief exhausted him, and he died of a "fever" brought on thereby at 57.

Napoleon died of cancer of the stomach.

Thomas Gray, author of "An Elegy Written in a Country Churchyard," died at 55. He was subject to hereditary gout. One day at dinner he was taken suddenly and violently sick, with pain in the stomach, and died on the sixth day.

Burns died at 37. Of convivial habits, he perished from drink and exposure. One day in January, 1796, he dined at a tavern in Dumfries. He was barely convalescent from a spell of sickness, and was in no condition to stand exposure. The night was very cold, and Burns, wandering

homewards in an intoxicated condition, sat down upon a doorstep, and fell asleep. Rheumatism supervened, and although he lived until the next July, he never recovered. During the last few days of his life, he was in a state of low muttering delirium.

Byron was born with "club foot." His mother, who was a misanthrope, always spoke of him as a "lame brat." This defect was finally remedied to the extent of enabling him to wear a common boot. He early showed signs of obesity. This was to him a matter of much chagrin, and he combatted the tendency by very low diet and medicine. He died in Greece at the age of 36, of heart complication, coming up during an attack of acute inflammatory rheumatism. Death was sudden.

Cromwell died of remittent fever.

Sir Walter Scott had several strokes of apoplexy. His memory failed, and softening supervened. The end came at 61.

Shelly was drowned by the capsizing of a boat in the bay of Spezia.

Keats died of consumption.

Voltaire died of strangury, probably due to enlarged prostate. Very much has been said by ecclesiastics about the agony of his last days, as though it was a judgment for his outspoken agnosticism. What nonsense! In the days of 1778, when this condition received no treatment worthy of the name, what physician would doubt but that the last days of Voltaire dying at 84, of strangury, must of necessity have been agonizing?

Galileo had stone in the bladder. With care he might have lived to shed upon that benighted time the rays of his intellectuality much longer. But he and the church differed on astronomy. Galileo asserted that the earth travels around the sun. The church would brook no such heresy. Galileo was dragged out in winter, jolted over rough roads in bad weather, to appear before the Inquisition. Exposure, imprisonment and ill-usage killed him—a martyr to progress.

John Milton died at 65, of "gout fever," or "gout struck in," as it was called—our gout retrocedent. It is a condition in which gout leaves the joints, and attacks some internal organ.

John Bunyan rode home in a heavy rain, took a "fever" and died.

Sir Isaac Newton was long a sufferer from gout and stone in the bladder. He is supposed to have died from the latter.

Dean Swift once pointed to a dying tree, and said: "I shall be like that tree—I shall die at the top." He had Ménière's disease, producing paralysis, then aphasia, and finally a decay of all the mental faculties. He lived a year without speaking a word.

Edgar A. Poe was picked up in the streets of Baltimore, one morning in 1849, and taken to a hospital, where he died without regaining consciousness. His death was attributed to drink and exposure. There has always been a suspicion that he may have been the victim of an assault. Age 38.—*Jour. Am. Med. Assoc.*

SYPHILITIC SPINAL DISEASE.

Dr. Sottas has published an elaborate study of syphilis as it affects the spinal cord. From the *International Medical Magazine* we learn that the author has formulated the following conclusions as resulting from his observations on this important subject: 1. Syphilis can act on the nervous system in two ways: First, directly; in attacking the parenchyma, it determines thus at the onset of the affection the first vague nervous troubles of the secondary period, and later, perhaps, certain systemic affections, as tabes. This mode of action is not clearly explained, for there are no anatomical characteristics which permit us to recognize the origin of the affections which are attributed to it. Second, indirectly, in producing an inflammation of the vascular, lymphatic, and connective-tissue elements. The alteration of the parenchyma is secondary to these lesions. The reality of this process cannot be disputed; it is affirmed by the aspect of the inflammatory lesions, which, although not special to syphilis, are nevertheless to a certain point characteristic of this affection. The process can strike all parts of the cerebro-spinal system, but is limited sometimes exclusively to the cord. 2. Syphilis of the cord appears at a period near that of infection, with a maximum between the end of the first year and the end of the sixth, and is much more frequent in men. 3. The inflammation begins with the vascular walls and perivascular regions and involves especially the small vessels of the periphery of the cord. In the large vessels it involves the internal and especially the external tunic, developing about the vasa vasorum. From this point it involves the perivascular lymph space, afterward the lympatic system of the meninges, and finally the entire arachnoid cavity. The infection spreads by the circulatory system and rapidly in the lymphatic system, where it assumes an independent form. At this period the lesions are constituted by: An inflammation of the vascular walls, which attains its maximum in the veins and small vessels; a diffuse general infiltration of the connective tissue of the meninges, an irritation of all the surfaces bathed by the cerebro-spinal fluid (surfaces of the meninges, ventricular walls). These inflammatory lesions are characterized by a tendency to nodular formations

(miliary gummata of the meninges, of the vessels of the cord). 4. The alterations of the nervous parenchyma, of the essential elements, and of the neuroglia are secondary; they may result from imperfect nutrition on account of the vascular lesions of the cord and of the nourishing membrane, or from an invasion of the medullary parenchyma by the specific infiltration. The first is the more important cause. 5. According to the intensity, the distribution, and the rapidity of evolution of the primary lesions, the anæmic necrosis of the nervous tissue appears abruptly as a transverse softening, which may be located at different points of the cord or predominate in one or the other vascular department; or else it appears slowly, and then the destruction is accompanied by a process of substitutive reaction of the neuroglia, which replaces the destroyed elements. This period of substitution is favored by the partial return of the circulation (collateral circulation, development of the vasa vasorum, formation of new capillaries in the obliterated vessels), and terminates in the neuroglia sclerosis. The connective tissue which enters the cord with the vessels is also thickened. 6. Although the necrobiotic lesions followed by selerosis constitute the principal alteration, there are certain medullary and especially radicular changes, which result from the invasion of the nervous tissue by an infiltration extending from a point in the meninges or from a perivascular sheath. This process can in certain cases assume a considerable importance. 7. While the lesions preserve the same characters, they may vary in their distribution. They are generally diffuse, but they sometimes assume the aspect of a transverse lesion, more or less intense, more or less limited, and located at different heights of the cord. They can be distributed more irregularly in a considerable extent of the cord. In every case they are more marked in the marginal zone. The dorsal location is the most frequent. Be the lesions confluent or be they disseminated, the result is always the same, and they produce the effect of a transverse lesion accompanied by a secondary degeneration ascending and descending. The lesions involve especially the territory of the postero-lateral spinal vascular system. They may predominate in certain regions of the cord—the lateral columns, the posterior columns, the gray substance of the anterior horns—and thus simulate certain systemic affections. 8. The ordinary clinical evolution is the following: At the period of formation of the primary vascular lesions and of those of the meninges, there are diffuse premonitory phenomena. At the period of softening and of degeneration of the nervous elements there is an attack of paraplegia, followed by paralytic phenomena and grave trophic troubles. At the period of sclerosis there is the chronic spastic paraplegia. The abrupt onset can be manifested without being preceded by a prodromic phase, or in other cases the spastic paraplegia comes slowly without passing through the acute stage. 9. Death may occur either in the first period of the affection from the localization or extent of the lesions, or more slowly from the progress of the affection, or from a complication. The ordinary termination of the affection is a spastic paraplegia persisting in a chronic state after an amelioration more or less marked. The complete recovery is possible only in certain conditions, when the primary vascular and meningitic lesions have been arrested before the final destruction of the nervous parenchyma. The reorganization of the necrosed nervous tissue, if it is possible, is manifested only in a limited degree. 10. In certain conditions the primary inflammation is accentuated in the meninges, producing a meningitis or a pachymeningitis, or else it assumes the form of a circumscribed gummatous neoplasm. 11. The iodo-mercurial treatment is demanded at the appearance of the first symptoms. It acts only on the primary inflammatory productions and is without influence on the necrobiotic lesions once established. 12. The medullary syphilis is always a serious affection. Death may intervene in spite of treatment, especially in the acute forms. Outside of certain rare fortunate cases in which complete recovery is obtained, the amelioration never goes beyond a certain limit, which is fixed, on account of an incurable sclerotic cicatrix of the cord.

Wine of Cod-Liver Oil—Some of its Uses. —It is now over a year since I commenced to use Stearns' Wine of Cod-Liver Oil with peptonate of iron, and my results have been so satisfactory that I think a recital of my experience may help some brother practitioner to an easier road than he has been used to travel.

One point at the outset. In the treatment of 16 cases of phthisis, I have yet to see the case that would reject the medicine.

This was the case even in that class which are considered beyond all hope and which die in a very little while, in the third stage. Of course this will be recognized as a great thing, for it happens so often that in cases of phthisis, especially in those of long standing, the stomach is not tolerant of anything, even food, not to say anything about a medicine which contains an oil and that cod-liver. Another point: I think that in cases of chronic bronchitis associated with anæmia, as many of them are, the iron plays a very important part in the cure. I have treated about

40 cases of subacute and chronic bronchitis with unvarying success. One case was peculiar, inasmuch as it was associated with asthma and had been under treatment of many physicians, and without relief. I consider it of sufficient interest to relate.

Miss A., an American, æt. 19, consulted me on 17th November, 1894, with the following symptoms well marked. She said that in the previous spring she had an attack of la grippe, which kept her in bed for three weeks. As convalescence set in she had a relapse which developed into a pneumonia, during the course of which she came near dying. Her convalescence was very tedious and she was left as sequelæ, a chronic cough which, on examination, I found was chronic bronchitis, all of the symptoms being present. At the time of my first visit she was in bed, well bolstered up with pillows, and, on inquiry, I found that it was impossible for her to lie down, from the persistent attacks of asthma from which she suffered.

She was anæmic, emaciated, little or no appetite, a persistent cough with but little expectoration. The bowels were constipated, and all of the organs seemed to be in a generally disordered condition, without being actually diseased. Small doses of calomel soon relieved the portal circulation and the bowels were kept regular by simple laxatives. Stearns' Wine of Cod-Liver Oil was administered, at first in teaspoonful doses four times a day, gradually increased to a tablespoonful three times a day. It was not long before a change took place, the first symptom to be relieved being the asthma. She could sleep better, and gradually the pillows were withdrawn, until she slept as others do in the recumbent position. Soon the cough began to lessen, the appetite to return, and in two months' time she had entirely recovered. Aside from the calomel and the laxative, she did not take another thing in the way of medicine during the whole period of my attendance.

This case, while possessing some points of unusual interest, is not, in the main, unlike many others which I have treated with this preparation and with such unvarying results, that it has become almost a routine.

In phthisis, it relieves the symptoms and lessens the strain upon the general system. I have used it with great advantage in cases of simple chlorosis.—E. E. Stilwell, M.D., in *New England Medical Monthly.*

ALBUMINURIA DURING PREGNANCY.—In a paper on this subject, Dr. Harry G. Utley (*American Journal of Obstetrics*) says that albuminuria is simply an indicative symptom. Its meaning and import must be determined by the gravity of any coincident pathological renal condition (as shown by the urinary examination) and by the presence and degree of severity of the general manifestations of kidney disease. The treatment, therefore, is to be directed to the condition or set of conditions with which the albuminuria is connected or with which it is dependent, and its permanent disappearance will signify that the harmful processes or conditions with which it is related have become inoperative. Most naturally the therapeutic indications are suggested almost altogether by the condition of the kidney, the amount of elimination it can probably do, and the probable amount of noxious substances in the body to be eliminated, which latter condition can be made evident only the signs of uremic intoxication. It every instance it is wise to curtail the further production of toxin by restricting the amount of nitrogenized food. An exclusive diet of milk seems to fulfil the indications admirably, serving at the same time as a mild diuretic. The author has frequently seen albumin disappear altogether by the use of this measure alone. This result would seem to add some force to the proposition that albuminuria is often due to the presence and influence of these toxic materials. Excellent results may be gained by employing a mixed diet of foods poor in nitrogen, viz.: bread, butter, fruits preserved or fresh, vegetables in limited quantities, etc., of which only a sufficient quantity to sustain nutrition should be taken, for any excess has to be eliminated by an already over-worked kidney. This measure greatly relieves the kidney and puts it in position to more effectually and quickly recover. Further, if circumstances demand or even justify it, the elimination of the harmful materials may be both hastened and accomplished by the use of the other emunctorial channels—the bowels and the skin. The indications for using one or both of these, as well as the degree to which their functions should be stimulated, must be suggested by the merits of each individual case. They should in all cases be kept active. The bowels may be "appealed to" with very satisfactory results by the frequent administration of the compound jalap power, say in drachm doses every other morning, or any of the hydragogue cathartics, which will be found especially useful. As to the skin, its action may be encouraged by resorting to the hot bath, the steam bath, the hot-air bath, or the hot pack. The employment of the medicinal diaphoretics, especially pilocarpine, is not indicated except as a last resort, and even then the use of this agent should be extremely guarded, for the reason that pulmonary edema is very often the result and the burden of cardiac depression is put upon the patient,

possibly already struggling for life. It is probably neither wise nor necessary to unduly stimulate the skin function unless signs of beginning uremia are evident, and even then their gravity should dictate both the method and the extent and frequency of its employment. The wisdom of the use of the stimulating diuretics to aid elimination by the kidneys is much to be questioned, at least in those cases not showing symptoms of uremic intoxication, for it seems grossly unjust to goad on an already crippled organ when the same or a better result may be gained by the timely and judicious use of the eliminative powers of the bowels and skin. The high blood pressure incident to pregnancy can not be overcome until delivery is accomplished; but it is not proposed to refer in this article to the indications for the inducement of premature delivery. The above principles of treatment, in addition to the fulfilment of any symptomatic indications that may arise, if prudently employed will bring much relief to the kidney laboring under untoward circumstances, and yield grateful and lasting satisfaction to the conscientious "man of medicine" in whose hands the destiny of so many innocent lives reposes.—*Med. Rec.*

Predisposing Causes in Facial Paralysis.—Neumann *(Neurol. Centralbl.)* considers that in most cases where cold is the exciting cause of so-called rheumatic facial paralysis, there is also a predisposition which in many cases is hereditary. Two cases are quoted in which facial paralysis arose from quite trivial causes in patients whose antecedents showed in the one case migraine in the mother, and neurasthenia with facial twitchings in the father; in the other facial paralysis in the father and insanity in one aunt. In such cases hereditary weakness of nerve tissue, particularly of the facial nerve, is supposed to predispose to the molecular changes which interfere with conduction. These changes, although in the severer cases presenting the appearances of parenchymatous neuritis, may show no visible change in the slighter ones. The predisposition may, however, be acquired. The facial paralysis occurring in association with certain constitutional diseases, for example, diabetes, syphilis, tuberculosis, would be thus explained, the general disease weakening the nervous tissue, and thus predisposing to the local condition on exposure to some local cause, however slight. The special liability of the facial nerve to be affected he considers due not so much to its exposed position, else the ulnar should often be affected, but to the large number of lymphatics and lymphatic glands surrounding it at its exit from the stylo-mastoid foramen. Stagnation of lymph would favor morbid changes in the neighboring nerve, and such stagnation would be particularly likely to occur at night; hence the frequency of nocturnal onset of facial paralysis.—*Brit. Med. Jour.*

Acromegaly. — Tamburini analyses 24 published cases of acromegaly. In 17 of these there was tumor of the hypophysis cerebri; 8 of these were examined microscopically as well as macroscopically. Of the 7 cases in which no lesion of the hypophysis were observed, in 2 the disease was only six months old, so there was not time for gross change in the hypophysis, and it was not examined microscopically; in 2 others the disease was more probably osteo-arthropathy of pulmonary origin, and the other two were doubtful cases. So that the typical disease seems to be closely associated with affections, chiefly tumors, of the hypophysis. Various kinds of growth have been met with, the commonest being adenoma and its congeners. Adding a case of the author's, of the 18 the thyroid was hypertrophied in 9, atrophied in 1, normal in 3, and no record of it in 5. The thymus persistent in 8 cases failed in 3, no record in 7. Sympathetic ganglia hypertrophied in 6, normal in 2, unobserved in 10.—*Brit. Med. Jour.*

Tuberculosis of the Soft Palate.—Brocq (*Jour. de Méd.*, March 10th, 1896,) describes the case of a woman whose soft palate was covered by a series of small ulcerations having a punched-out appearance of some depth. There was also considerable infiltration, and on the surface a number of small yellow points. There was also laryngeal tuberculosis, and the author was certain of the tubercular, nature of the palate lesion. An interesting point was that the whole of the velum palati was involved, notwithstanding that the history was of only two months' duration. In this instance the patient was pregnant, and the writer draws attention to the rapid course of these somewhat anomalous tuberculous affections under such circumstances, a rapidity which he says in some cases may give rise to hesitancy in diagnosis. He recommends lactic acid in the treatment of buccal tuberculosis.

The *London Lancet* of March 28th, 1896, says editorially :—"Antikamnia is well spoken of as an analgesic and antipyretic in the treatment of neuralgia, rheumatism, etc., etc. It is not disagreeable to take, and may be had either in powder or tablet form, the being made in five-grain size. It is described as not a preventive of, but rather as affording relief to, existent pain. By the presence in it of the amine group it appears to exert a stimulating rather than a depressing action on the nerve centres and the system generally. If this be so, it possesses advantages over other coal-tar products."

OBSTETRICS AND GYNÆCOLOGY

IN CHARGE OF

J. ALGERNON TEMPLE, M.D., C.M., M.R.C.S., Eng.,

Professor of Obstetrics and Gynæcology, Trinity Medical College;
Gynæcologist Toronto General Hospital; Physician to the Burnside Lying-in Hospital.
205 Simcoe Street.

OBSTETRICAL SUPERSTITIONS.

In no department of medicine does the practitioner meet with so many absurd superstitions and traditions as in the practice of obstetrics. Like all superstitions, they are difficult to eradicate, and woe to the venturesome practitioner who undertakes the job; he is at once set down as having very little knowledge and less experience. It is not my purpose to give a list of these superstitions or traditions, but merely to mention some of the most common ones, laying special stress upon those productive of great harm to the lying-in woman and her off-spring.

As soon as a woman is known to be pregnant she is overwhelmed with advice from those of her friends who have been through the mill; even the husband does not always escape, but is commiserated with an account of morning sickness, though I have never seen a case in the masculine that could not be more properly ascribed to the worship of Bacchus than to that of Venus. A favorite and largely advertised remedy for lessening the pains of labor is known as "Mother's Friend"—an ointment, to be rubbed daily over the abdomen, said to insure an easy and uncomplicated labor; I have heard intelligent and well educated women highly laud this remedy. The prospective mother is urged also to look only at beautiful objects of art, etc., if she desires a pretty child. I have known these same well educated women to invest in a beautiful picture and spend hours each day wrapped in contemplation of it; less frequently they betake themselves to the study of higher mathematics and the sciences, hoping by this means to bring forth a being of extraordinary intelligence. Some of the friends also predict with confidence the sex of the child according to the manner in which it is carried. When labor begins, there comes a deluge of suggestions as to the position the woman should assume: if she extends her arms above her head, she is at once told to lower them, as such a position will knot the cord around the neck of the baby and produce its death. If her pains are very severe, and the attending physician advises the use of chloroform, the patient, if a multipara, will probably demur, because So-and-So told her that if ever under any circumstances she took chloroform it would kill her. If the patient does not object, some of the neighbor-women will "chip in," saying that it is not right to give it—that it is flying in the face of Providence, etc.

No labor is without some pain, but in many cases the pain is easily bearable; the ability to bear and to feel pain varies with the individual. I have delivered women who made no outcry and seemed to suffer a minimum of pain; they did not wish to take chloroform, and as there seemed to be but little suffering I did not insist upon its use. But I think it is the duty of every doctor to rob the lying-in chamber of all the agony possible; it is a cruel and disgraceful thing for him to sit and listen unmoved to the agonizing cries of a woman in this the most critical time of her existence when he has the power to safely and easily relieve her. With little effort on his part the lying-in room can be made very much less terrible to the prospective mother, and the frequency of abortions and conjugal onanism be thus indirectly diminished.

In the first stage the pain can be greatly mitigated by the use of chloral hydrate and the hypodermatic administration of morphine. Fifteen-grain doses of chloral given every half-hour until three doses have been taken will produce sleep, and after this the pain sets in with renewed vigor. A full dose of morphine may also be given; it quiets the pain for some hours, but when its effects die out the pains are stronger and more efficient.

In the second stage the analgesic *par excellence* is chloroform. No one now contends that its use in the lying-in room is dangerous. I have been unable to find a single well authenticated case of a death occurring from its use under such circumstances. If a retardation of labor occurs when chloroform is given, it is of short duration; if the

drug is given properly the patient will soon begin to add voluntary efforts when she finds they are less painful than befora,—by giving properly I mean it should never be pushed to the surgical degree, except during operation or when the head is crowding; its use in the latter instance is important, as it enables the accoucheur to control the advance of the presenting part, deliver it in the interval of a pain, and thus diminish the danger of laceration of the external structures.

In regard to chloroform favoring post-partum hæmorrhage, I have never seen a case that could properly be attributed to its use. In quite a large experience the only cases of post-partum hæmorrhage I have seen have been the result of long and fruitless efforts on the part of the mother, resulting in a complete fagging out of the uterus and necessitating artificial aid. None have resulted fatally.

When the child is born and the doctor is preparing to cut the cord, he is sometimes interrupted and told he must cut it longer, as the length of the penis at maturity depends on the length the cord is cut. I have never been able to verify or refute this idea, as the oldest male I have ever delivered is only thirteen. Old nurses insist on burning the afterbirth to avoid the occurrence of afterpains. Also to facilitate the passage of the placenta the patient is told to blow into a bottle or her closed hands or to take snuff.

Too early efforts to deliver the placenta are objectionable; and the practice of Credé's method of expression at the expiration of fifteen minutes does great harm, frequently resulting in retention of a part of the membrane and in cupping of the uterus. It is natural that the uterus should rest after its long labor, and the placenta will be extruded ordinarily when this has taken place.

There is an obstetrical superstition the observance of which has cost numberless lives and desolated many homes, viz., the fancied superiority of the old quilt or "comforter" as an absorbent of liquor amnii, blood, urine, etc. The older and dirtier it is, and the more often it has served in a similar capacity, the more highly it is prized. It is the duty of all physicians to aid in its complete abolition; the means of so doing are within reach of all, the only materials necessary for an aseptic pad being a yard or so of cotton to make a bag, and bran or sawdust with which to fill it. A little absorbent cotton or oakum should supplant the so-called elean rags used to catch the lochial discharge.

Puerperal fever is generally regarded as an unavoidable disease, but if the falsity of any theory has ever been proved it has been this.

Another pernicious superstition is that as soon as the baby is dressed it needs something in the way of nourishment,—usually fat bacon, a sugar teat, whiskey and water, or some variety of tea. The sooner such ideas are done away with, the better. The infant should not be given anything, but after a while put to the breast, and then wait for the secretion of the mother's milk, which will take place before it succumbs to starvation.

There are many other superstitions relating to the child: For instance, it is considered highly improper to take it down stairs before taking it up: Its nails are to be bitten off, for if they are cut the child will be a thief, etc., *ad nauseam*. The mother must stay in bed for nine days and eat nothing but toast and tea,—she was formerly starved, but now she is allowed to eat anything she choses in reason and is kept in bed (if she has had a hard labor) for from two to three weeks. Those of her sisters who get up very early, age much quicker, as witness the North American Indians.—Dr. T. S. Bullock, in *Am. Prac. and News.*

THE WALCHER POSITION DURING PARTURITION.

What are the indications for the use of the Walcher position, and what its objections?

1. Cases of protracted labor in which the dimensions of the pelvis are normal or the antero-posterior diameter is somewhat shortened, the head being above the brim. The patient being placed in the position of extreme extension for an hour or more the pelvic joints may become so relaxed, or the antero-posterio diameter lengthened by the necessary half-inch, that the head will engage and labor be terminated normally or with forceps; the high forceps, version, or symphisiotomy being avoided.

2. Cases in which version, either cephalic or podalic, has been performed, or footling or breech cases. The flat pelvis, the generally contracted pelvis, transverse positions, occipito-posterior positions, are in this category. The cases which were quoted show that in some instances labor will be terminated naturally, and that in others the forceps must be used as an adjuvant.

3. Cases in which some form of operative procedure has already been adopted without success.

It has thus far been used after high-forceps operations, version, symphysiotomy, craniotomy, and low forceps, and it will probably be shown to have a yet more extensive field.

The length of time during which this position may be used to advantage depends upon the effect which it produces upon the patient. It has been shown by those who have used it that it may be discontinued and re-employed without disadvan-

tage, and sometimes with positive advantage.

After the legs have been suspended half an hour or an hour, it would usually be desirable to discontinue the position for a time, since it is tedious and may cause interference in the venous circulation of the legs and thighs. After a rest of an hour, the position can be resumed if necessary.

The application of the forceps in this position will probably be found less easy than in the classical lithotomy position. It may be that this difficulty can be remedied by placing the patient in the Trendelenburg position, in which the condition of extension would still be preserved.

The contribution of Walcher to practical obstetrics is certainly a valuable one, and will often prove as useful as it is simple and harmless.—*Med. News.*

RUPTURE OF THE UTERUS, WITH RECOVERY.—Queisner (*Centralbl, fur Gynäkologie*, 1895, No. 51, p. 1341) has reported the case of a woman, 38 years old, who in the course of her ninth labor experienced a sense of something having torn in the abdomen. The pains, which previously had been active, suddenly ceased, and the woman lost consciousness and presented the appearance of collapse. External examination showed the breech to be above and the head at the superior strait; the small parts could not be detected. On introducing the hand into the dilated os a uterine laceration, between four and five inches long, could be felt at the right side of the fundus, in which rested the right lower extremity of the fœtus, which projected into the peritoneal cavity through a tear two inches in extent. The umbilical cord was pulseless. The right foot was carefully drawn into the uterus, and version readily effected. The placenta was seated upon the anterior uterine wall, and was removed by the hand. After the removal of the fœtus the uterus contracted well upon the left side, the right half remaining relaxed and boggy. The pulse was improved by injections of ether, The hæmorrhage was slight and tamponade was unnecessary. A five-pound sand-bag was placed over the uterus, a bandage applied, and opium administered. The woman was out of bed on the 14th day. After the lapse of four months the uterus was anteverted and displaced to the right. Upon the right side a firm, sensitive cicatrix could be felt. Five months later the cicatrix could still be appreciated, but the sensitiveness was less. The only predisposing influence to which the rupture of the uterus could be related was the lifting of a heavy weight, as there appeared to be no disproportion between the uterus, the fœtus, and the uterine contractions.—*Med. News.*

DECIDUOMA MALIGNUM.—Apfelstedt and Aschoff (*Arcivd. f. Gynak.,*) add to medical literature two more cases of the remarkable disease generally known by the above title, though, on histological grounds, they believe that it should rather be termed chorioma malignum. The first patient, aged 33, aborted at the fourth month on October 4th, 1894. The membranes were passed unruptured. As usual in this newly-recognized disease severe uterine hæmorrhages followed the miscarriage. On Feburary 5th, 1895, a mass was removed from the uterus; as the membranes had been discharged entire it could not have been a placental polypus. On May 17th, the patient being worse, the curette was used. The masses removed were found to be sarcoma deciduo-cellulare. On May 24th the uterus was removed by Runge. The patient died on the twenty-sixth day. The uterus contained a malignant deciduoma, and there were metastatic deposits in both lungs and in the liver, pancreas, mesentery, intestines, and cancellous tissue of the head of one femur. The second patient was 42. She was delivered of a vesicular mole on March 21st, 1895. The left labium became swollen, and the swelling extended up the vagina; it was laid open on June 19th; then, to the surprise of the observers, tissue precisely resembling a vesicular mole was found growing from its walls. On June 20th similar masses were removed from the uterine cavity. Pyæmia, originating in suppuration in the cavity laid open in the labium, caused the death of the patient on July 25th. Metastatic deposits were found in the lungs and spleen.—*Brit. Med. Jour.*

ANTISEPTIC DOUCHES AFTER LABOR.—In the obstetric clinic the question is frequently asked, do you give antiseptic douches after labor? In answering this question Dr. Wills gives his opinion as follows: After a perfectly normal labor conducted under antiseptic precautions, in a clean room, the hands of physician and nurse having been perfectly prepared, and the patient a healthy woman, one free vaginal douche containing some mild antiseptic agent, such as creolin, lysol or boric acid, is sufficient, provided the vulva be kept covered with an occlusion dressing. Both the liquor amnii and lochia are in such cases sterile fluids, and infection is not likely to occur except from without, this being prevented by the occlusion dressing. When, however, the labor has been long, forceps have been used, or the physician's hand inserted within the uterus for version or removal of the placenta, or considerable laceration of the parts has occurred, an antiseptic douche may be used once a day for five or six days with good effect.—*Philadelphia Polyclinic.*

Cycling and the Saddle.—Bicycles have taken the country and the world by storm and are fast coming into universal use. That they have accomplished no end of good none will dispute; that they have brought with them certain evils, though not perhaps understood by people in general, is distinctly recognized by the medical profession. This does not result from any defect necessarily inherent in the bicycle, but from faults in its construction, particularly in the saddle employed. Speed has been quite generally the object primarily aimed at, the health of the rider being given very little consideration.

From a medical standpoint bicycle saddles are, as a prominent New York physician expressed it in a recent article, "physically and morally injurious. The entire weight of the body comes on the soft tissue of the pelvic floor. The sensitive tistues, subject to such pressure and irritation, must suffer, and the evil cannot yet be estimated."

As all physicians are well aware, few persons afflicted with urethral, prostatic or bladder trouble are able to ride a bicycle without materially increasing the difficulty. This must be distinctly charged to defective saddles, and the same cause will produce disease in perfectly healthy people. Hence the importance, the absolute necessity, of using a proper saddle cannot be exaggerated.

As the writer referred to aptly expresses it: "A perfect saddle for either man or woman is one that will maintain the body in an easy and proper position. It must be a surface large enough to receive the tuberosities so that the weight come on the gluteal muscles. It should have, like an army saddle, a hole in the center, to relieve any injurious pressure. This will prevent urethritis, prostatis, prostatic abscess and costitis. The saddle should allow pedaling without needless friction. The rider should have a firm yet elastic seat."

In the Christy Saddle Messrs. A. G. Spalding and Bros. have secured a bicycle saddles that fully meets all the demands and satisfies at once all medical and scientific requirements without losing any possible advantage in other directions.

It is molded in strict anatomical conformity to the parts of the body with which it comes in contact; comfortable yet firm cushions are employed and so adjusted as to properly receive the bony prominences of the pelvis. These cushions, which are removable, rest upon a perforated base, and with a free circulation of air through the horn of the saddle, insure a cool seat, a most important consideration from the standpoint of comfort as well as hygiene. The frame is made of metal and maintains its correct position under all circumstances. The saddle is easily adjusted at the proper angle, Numerous testimonials from eminent surgeons declare this saddle to meet all medical requirements, while eminent riders give it the highest praise.

Hysterical Breast.—Gilles de la Tourette (*Nouv. Icon. de la Salp.*, vol. 8, p. 107) says this hysterical affection of the breast consists in a temporary or permanent enlargement with distinct hyperesthesia of the integument. During the attack there are various local vaso-motor disturbances which vary from simple congestion to distinct edema, and which at times perhaps terminate in cutaneous gangrene. The hyperesthesia is sometimes so intense that the patients cannot endure the contact of clothing. It is sometimes permanent, but there are always exacerbations produced by the causes which ordinarily aggravate hyperesthetic zones (intense emotion, menstruation, etc.); at the same time that the hyperesthesia increases, the breast becomes the seat of prickly, lancinating pains and a burning sensation, at times very intense; it becomes swollen, sometimes to double the normal size, and the nipple is in a state of erection. Not infrequently at the height of the attack there is a convulsive seizure, or at least an indication of the same, consisting of a feeling of strangulation, dizziness, and other cephalic phenomena. The appearance of the integument is variable. There may be white, red, or cyanotic edema. In the more simple cases the tumefaction disappears with the pain, but very often, especially if the attacks are frequent, the swelling persists to a certain degree and is always accompanied by more or less hyperesthesia. During the attack all palpation is impossible, but in in the intervals one or two tumors, only slightly tender to pressure, may be discovered by deep pressure.

The diagnosis may be difficult even during the intervals, but is much more so during the attack, particularly if cutaneous gangrene with ulceration is added to the former symptoms. It is possible that secondary infection may be grafted on to the spontaneous gangrene, producing suppuration, swelling of the axillary glands, etc., but this is exceedingly rare.—*Med.*

General anæsthetics are used far too often. As two per cent. boiled solution of cocaine hydrochlorate injected, with a sharp needle, *into* the skin, not under it, will enable one to perform such operations as castration, the removal of non-malignant breast tumors, even if they are as big as a cocoanut, many herniotomies, where there is strangulation, and the removal of almost any subcutaneous tumor up to four pounds in weight. Intra-abdominal work, however, to be well done, requires general anaesthesia.

NERVOUS DISEASES AND ELECTRO-THERAPEUTICS

IN CHARGE OF

CAMPBELL MEYERS, M.D., C.M., M.R.C.S. Eng., L.R.C.P. Lond.

Neurologist to St. Michael's Hospital. 192 Simcoe Street.

SOME COMMON FORMS OF "NEURASTHENIA" AND THEIR TREATMENT.

BY GEORGE HERSCHILL, M.D., LONDON, ENG.

(Continued from last month.)

In the ætiology of neurasthenia, due to real exhaustion of the nervous centres, heredity plays by far the most important part as a predisposing cause, although in a considerable number there is no ancestral taint. Where the tendency is inherited, the affection as a rule appears early in life, and is remarkably rebellious to treatment. When neurasthenia arises in people of middle age, as it constantly does, it is usually quite independent of heredity. One must be careful to distinguish an hereditary tendency to neurasthenia from a neuropathic tendency. The former has no tendency to produce anything but a neurasthenia; the latter may develop insanity, sclerosis, or other serious diseases of the nervous system. In fact, if we find a neurasthenic with a marked family tendency to insanity, I think that we should strongly suspect that his disease is the development period of a psychosis, and not true neurasthenia. Among other causes acting by heredity, we must place gout and intemperance in the parents. It is also probable that advanced age of both parents may predispose to neurasthenic offspring. A child of such parents will come into the world with feeble recuperative power. Another predisposing cause of neurasthenia during adult life, is the far too common overstrain to which children are subjected during the process of their education. The striving to obtain scholarships and to pass competitive examinations at too early ages, is responsible for a great deal of the neurasthenia that we meet with; likewise the forcing young girls who have no taste for music, to spend many weary hours daily at the piano. It is also not at all unlikely that heredity may play an important part in the production of neurasthenia, even when due to toxic causes. It is quite easy to understand that an individual coming from a neurotic stock may exhibit a diminished resisting power to various toxic agents, and that a toxine which would be easily dealt with by a healthy organism, may in him produce symptoms of neurasthenia. We have an illustration of this in the different toleration of individuals to tobacco. A daily dose which will be entirely harmless in one man, in another will produce grave neurasthenic symptoms.

We may divide the exciting causes of neurasthenia into two groups, non-toxic and toxic. In the former we shall find overstrain, worry, and traumatism; in the latter the influence of poisons, such as tea, tobacco, alcohol, lead, the toxines generated in the gastro-intestinal tract, and the poisons of gout, tubercle and syphilis. Traumatism should really, I think, be placed in the second group, as the symptoms are in all probability due to a toxine generated by shock or terror. This is proved by the poisonous state of the urine after great mental emotion. The neurasthenia of gout, syphilis, and tubercle is, of course, a part of the respective disease, and can only be considered with the other neurasthenias for the purpose of differential diagnosis.

There are very many subjective and few objective symptoms of neurasthenia, and although any given patient will probably only have a limited selection, it is necessary to be acquainted with them all if you wish to be able to diagnose the cases which you will meet. I would here say, at the risk of appearing wearisome, that the recognition of the fact that the patient has neurasthenia, is only the first step in the diagnosis. You have afterwards to determine what disease this neurasthenia is a part of, or what morbid condition it denotes. But the first step is to recognize that the patient is neursthenic, and to do so it is absolutely necessary to carry in your mind the whole formidable list of possible symptoms. This is not so difficult as you imagine if you classify them. The following is the arrangement which I have adopted myself:

Classification of the Symptoms of Neurasthenia.

I.—Subjective.

(A) Motor :—

1. Muscular weakness in the form of incapacity for prolonged exertion.

2. A sense of general weakness, especially in the back and legs. (Real loss of power would suggest organic disease.)

(B) Sensory :—

a. Gereral symptoms.

1. Feeling of indefinite discomfort, which the patient is unable to accurately describe ; he will often complain of feeling "ill all over."

2. Feeling of profound exhaustion, or of always being tired.

3. Diffuse aching of the limbs or trunk.

4. A feeling of uncertainty of movement. There is no actual inco-ordination, but the patient feels an uncertainty about placing his feet.

5. Flushes of heat or cold.

b. Sensations referred to the head—

1. Headache.

2. Sensation of emptiness or lightness of the head.

3. Giddiness. (The attacks will often come on in the street.)

4. A sensation of profound misery in the head. This is indiscribable.

c. Localized sensory phenomena.

1. Feeling of construction or pressure or uneasiness in over a limited area ; a sensation of a cord tied around a limb is not uncommon.

2. Local pain—

a Back-ache.

b. Pain in the left infra-mammary region. This is exceedingly common, and occurs in a large proportion of female neurasthenics.

c. The local pain or discomfort of gastric neurasthenia, or "atonic dyspepsia," or of hyperchlorydria.

3. Areas tender on pressure. This subject has been exhaustively worked out by Dr. Henry Head, and the results communicated to the profession in 1892.

4. Dysæsthesias of various kinds, such as numbness, tingling, pins and needles, a feeling as of cold water trickling, itching sensations of heat or cold.

d. Visual symptoms.

1. Photophobia and lachrymation. Many neurasthenics are much annoyed by watering of the eyes on going into the cold air.

2. Asthenopia. This may be met with in two forms, either as a defect in the retina, or as a partial failure in the muscular accommodation. In the former case we may have diminution of the visual field, in the latter we shall find fatigue, headache, or vertigo, produced after quite a moderate use of the eyes. Under these conditions slight degrees of astigmatism, which, in a healthy person, would be of no moment, may set up such disturbances as to require to be corrected by glasses. The fact must not be lost sight of that it is quite possible for neurasthenia to be itself set up in persons having a tendency to it by astigmatism of not more than 5.D.

e. Disturbances of hearing.

A certain amount of hardness of hearing is often complained of by neurasthenics, but a commoner phenomenon is tinnitus, or singing in the ears. I have reason, however, to think that, with the progress of knowledge, an increasing number of such cases will be found to be due to nasal obstruction at night, owing to turbinal varicosis.

f. Disturances of the sense of smell.

Cases have been reported in which there has been hyperosmia and parosmia, but in all probability there has been some unrecognized disease of the mucous membrane. If there are any neurasthenic conditions in which the sense of smell is affected, they must be of extreme rarity.

g. Alterations in taste.

These may be part of a gastric neurasthenia, but, in many instances which have been reported, are probably due to overlooked nasal obstruction.

(C) Psychic.

1. Defect in the power of continued mental application. Loss of the power of concentration. In these cases work continued after the fatigue symptoms come on cause headache, vertigo, or sensations of pressure in the head. In many of the patients presenting these symptoms who are supposed to be neurasthenic, the real trouble is caused by an unrecognized astigmatism. In others there is neurasthenic weakness of the recti muscles, which in many cases is aggravated and perpetuated by slight degrees of astigmatism.

2. Loss of memory. This is usually more apparent than real. Patients fancy that they are losing their memory and are greatly alarmed. This trouble depends very often upon the lack of concentrative power mentioned above. The memory of any idea depends upon the intensity with which it has been impressed upon the mind, and this will vary directly with the power the patient has of directing his individual attention to the subject.

3. Uncertainty, vacillation, and lack of decision. This mental condition often shows itself by such simple things as going back once or twice to

see if the gas has been properly turned off.

4. Irritability of temper, a tendency to become angry at trifles, constant unhappiness at fancied slights.

5. Introspection, nosophobio.

6. Mental depression.

7. Morbid fears.

a. General—

1. Associated, when the attack comes on, with physical phenomena such as pallor, or sweating.

2. Unassociated with such symptoms.

b. Special—

1. Claustrophobia The attacks of panic come on when the patient finds himself shut up in a closed place, such as a church or railway cariage, from which there is no escape for a certain fixed time.

2. Agoraphobia: The same thing coming on in open places.

3. Monophobia: The fear of being alone Besides these, there are several other fears, to each of which a special name has been given.

8. Insomnia.

9. Imperative conceptions: The patient feels a sudden impulse to perform a certain act, such as to throw himself out of a window, to take poison, or to injure himself or others. The patient is usually in a state of great distress lest he should have an impulse which he could not withstand.

(D) CIRCULATORY DISTURBANCES:—

1. Consciousness of palpitation, or arrhythmia of the heart.

2. Shortness of breath.

3. Consciousness of pulsations in the neck, ears, or abdominal aorta.

4. Anginoid attacks.

(D) DIGESTIVE DISTURBANCES, OR GASTRIC NEURASTHENIA:—

1. Pain.

2. Flatulence.

3. Sinking sensation.

4. Constipation, etc.

II.—OBJECTIVE.

The objective signs of neurasthenia are not numerous, but those present are of considerable interest. They are—

1. MUSCULAR SYMPTOMS;—

a. Tremors. These are rare, but when present are rather fine and accompany conscious movements. They are most frequent in traumatic neurasthenia.

b. Clonic Spasms. We are all of us familiar with the twitching of the fibres of the orbicularis, called by the laity "live blood." In neurasthenia, it is exceedingly common to get the same phenomenon in portions of the larger muscles of the trunk. It is especially the case in that form of the complaint due to excessive use of tobacco.

c. Tonic Spasms. These are of two kinds.

1. If you strike sharply on an intercostal muscle in a neurasthenic you will often throw the whole muscle into contraction. You can often observe this also in phthisical patients.

2. If you suddenly approximate passively the two attachments of a muscle in certain neurasthenics, it will be thrown into a brief tonic contraction.

d. The knee-jerk is sometimes excessive and occasionlly diminished.

e. Ankle clonus can often be obtained.

2. EYE SYMPTOMS.

a. Contraction of the visual field. This is often merely a fatigue sympton.

b. Pupillary phenomena.

1. Dilation of the pupil.

2. Sluggish reaction to light.

3. "Hippus." This is alternate dilatation and contraction of the pupil during excitement.

4. Transient inequality.

3. CIRCULATORY PHENOMENA.

a. Alterations in the rhythm or frequency of the cardiac contractions.

b. Loss of vaso-motor tonus as shown by coldness of the hands and feet, easy production of the red mark upon the skin known as the "Tache Cerebrale," and in rare cases a condition of the fingers resembling the early stages of Raynaud's Disease.

4. STOMACH PHENOMENA.

a. Splashing and other signs of a dilated stomach.

b. Gastroptosis and enteroptosis.

c. Abnormality in the composition of the stomach contents after a test meal.

5. DISTURBANCE OF THE SECRETIONS.

a. Deficient secretion of saliva, perspiration, urine, or of the HCL. of the gastric juice.

b. Polyuria, hyperidrosis, hyperchlorhydria and hypersecretion of gastric juice.

c. Excess of uric acid and urates in the urine.

d. Facial acne.

6. SKIN PHENOMENA.

These almost invariably point to the the absorption of toxines. Those commonly met wit are—

a. Brown pigment spots on the forearms.

b. Urticaria.

c. Lichen urticatus and other itching rashes.

(To be continued.)

PATHOLOGY AND BACTERIOLOGY

IN CHARGE OF

H. B. ANDERSON, M. D., C. M.,

Pathologist to Toronto General Hospital; Professor of Pathology Trinity Medical College, and in charge of the Trinity Microscopic Pathological Laboratory, Toronto General Hospital.
233 Wellesley Street.

FORMALINE GELATINE: A NEW MODE OF ANTISEPTIC TREATMENT.

In the *Therapeut. Monatsch.*, Dr. Schleich relates his experiences in the use of formaline gelatine in the treatment of wounds. The formaline gelatine is prepared by drying gelatine dissolved in water over formaline vapor. A firm, resistant, stony, hard transparent body is thus formed. The question first to be decided was whether the gelatine would gradually dissolve and give off its formaline, and in this way set up a continued state of asepsis in its neighborhood. In the first experiment resection of intestine was performed on a rabbit, and before closing the abdominal wound a piece of formaline gelatine the size of an apple was introduced into the abdominal cavity. The animal was killed six and-a-half weeks later and only a minute remnant of the gelatine was found in the midst of the newly-formed connective tissue. Further experiments were modified by the author to the extent that a quantity of virulent bacteria cultures was mixed with finely-powdered formaline gelatine and introduced into the system, all of which were absorbed without any reaction. These results led the author to use the gelatine in the treatment of wounds in the human subject. It was used in the form of powder, and Dr. Schleich became satisfied that it was gradually decomposed by continuous freeing of formaline, and consequent steady asepticism of the wound. Up to the time of writing he has used it in 120 cases of acute suppuration, 93 aseptic healings of wounds, 4 compound fractures, and 2 deep scalp wounds, and he was in a position to state that by its means, all acute suppurations were cut short, and that in every wound an aseptic course could be guaranteed without the adoption of any further measures. Where necrotic tissue was present, however, it was powerless, as contact with sound tissue alone was able to set free the formaline. In order to render it serviceable in such cases a means must be discovered of setting the formaline free outside the body, and such a means has already been found by the author in a peptic acid solution (pepsin 5 parts, acid hydrochl. 0.3 parts, water to 100 .The powder with which the wound is powdered requires moistening with the above pepsin solution. The mode of preparation of the formaline gelatine is given by the author.

The fact that when the gelatine was enclosed within the system it became eventually completely replaced by connective tissue led the author to still further experiments. These led to the conclusion that formoline gelatine, being procurable in any shape, and on being heated capable of being moulded into any form, it might be employed for the plastic connective tissue closure of defects of all kinds. Impregnated with lime salts, it proved itself capable of replacing pieces of bone removed in the course of resection.—*Berlin Cor. Med. Press and Circular.*

Upon the Specific Peculiarities of the Protective Substances found in the Blood of Animals immunized against the Bacillus Typhi and the Bacillus Coli Communis.—Löeffler and Abel (*Centralblatt für Bacteriologie und Parasitenkunde*, Bund xix. Nos. 2 and 3, January 23, 1896) experimented with four cases of virulent typhoid and two of virulent colon bacilli. The exact minimal fatal dose of cultures of the various bacilli was carefully worked out by inoculation into guinea-pigs. The animals selected for immunization were dogs. Each animal received inoculations of live cultures in increasing doses, until at the end of about three months it was found that protective substances were present in the blood.

The results of the work are summarized as follows:—

(1) The immunization of dogs to increasing doses of virulent cultures of bacillus typhi and bacillus coli communis produce in the blood of these animals specific protective substances operative against the particular bacillus by which they have been produced.

(2) The normal serum of the dog, without any preliminary treatment, has a protective power, not only against the minimal fatal dose of the bacilli,

but also against several times this dose. The size of the dose of toxic bacilli always bears a definite relation to the quantity of previously injected serum.

(3) The specificity of the serum of immunized animals is only observable when the animals are injected with distinctly larger doses of the bacteria than can be combated by the normal serum.

(4) The specific nature of the serum is obvious from the results of injections of a mixture of the toxic bacteria and the protective serum.

(5) The typhoid serum protects against the colon bacillus and the colon serum against the typhoid bacillus more powerfully than normal serum, thus pointing to a relation between the organisms.

(6) The protective serums do not protect the toxins in the dead bodies of the bacilli any more powerfully than normal serum.

(7) By the injection of normal serum into the peritoneal cavity of the guinea-pigs and the subsequent injection, after twenty-four hours, of twice the fatal dose of dead typhoid bacilli, the guinea-pigs can, within two weeks, be immunized to 100 times the fatal dose of living typhoid bacilli.

(8) Guinea-pigs can endure the intraperitoneal injection of typhoid bacilli if one begins them with less than the fatal dose and increases the multiples rapidly, so that within forty-eight hours a forced immunity to 100 times the fatal dose is reached.

(9) By the injection of 0.5 cubic centimetre to 1.0 cubic centimetre of a powerful typhoid serum animals can be saved from the effects of twice the fatal dose (intraperitoneal), which would bring about the death of a non-protected animal in twenty hours.

(10) The results of the experiments bring about a perfect confirmation of the studies of R. Pfeier upon the cholera bacteria and cholera serum.—*Univ. Mag.*

RESEARCHES UPON THE PATHOGENESIS OF PERITONITIS OF INTESTINAL ORIGIN.—Klecki (*Annales de l'Institut Pasteur, 1895,*) found that the colon bacilli secured from the ileum of a dog were highly virulent, while those from the jejunum and colon were much less so, and from this concludes that in different parts of the intestine the virulence of the bacillus varies.

Kleck regards the pathology of the colon bacillus as dependent upon a symbiotic action with other intestinal bacteria. The escape of the colon bacillus from the intestine is in combination with these other pathogenic (guinea-pigs) and non-pathogenic bacteria can cause peritonisis.—*Univ. Mag.*

BEARDS AND BACTERIA.—The bacteriology of the beard has not yet, so far as we are aware, been exhaustively studied; this might be a new world for one of our young Alexanders of pathology to conquer. That it is possible that disease can be carried in the manner suggested will hardly be denied, but we cannot say that we think the danger so great that doctors need sacrifice their beards on the altar of hygiene. Most will think even the careful sterilizatfon of the beard on leaving a sick room a counsel of perfection. If the scrupulous hygienist thinks such a precaution necessary, he should be consistent, and insist on doctors shaving their heads and even their eyebrows. How would our professional sisters like this? To live in the odor of antiseptic sanctity we should, after due purification, clothe ourselves in cotton wool, wrap our heads in sterilized gauze, and go about like veiled prophets of Khorassan.—*Brit. Med. Jour.*

TO PRESERVE THE URINE.—Dr. Leffmann finds choloroform the most satisfactory of the various agents suggested for preserving specimens of urine. About six or eight drops are added to each fluid ounce, and the mixture well shaken. The excess of chloroform soon collects at the bottom of the bottle. Samples so treated will keep for months, even in the hottest weather. Chloroform promptly reduces Fehling's solution. If, therefore, it be desired to test for sugar, the chloroform must be removed by boiling the liquid; or, better, the bismuth or phemylhydrazin test must be used. Chloroform does not interfere with these nor simulate sugar.—*Med. Times.*

HOW TO STERILIZE COTTON.—A rather ingenious plan for sterilizing cotton is referred to in a French contemporary. A pieee of cotton is taken, twisted ou a stick or a piece of wood, and dipped into a saturated alcoholic solution of boracic acid for a moment or so. It is then withdrawn from the solution, and a light is applied to it, as the result of which the alcohol burns out, while the boracic acid prevents the cotton from burning. Five seconds are enough; as soon as the flame turns green it is extinguished. The cotton remains white, dry, warm, but absolutely sterilized.—*Med. Press and Circular.*

Do not use the old-fashioned curved bistoury in opening the simplest abscess. It is unsurgical because you proceed from within outward—from the unknown to the known. This is a false principle in philosophy, in surgery, and in everything. Cut from the surface inward and you can deal with difficulties in the order in which they occur. Always work with the aid of sight and do not pin your faith on anatomy.

NOSE AND THROAT

IN CHARGE OF

J. MURRAY McFARLANE, M. D.,

Laryngologist to St. Michael's Hospital. 32 Carlton St.

MODERN METHODS OF TREATING DISEASES OF THE NOSE AND THROAT.

BY O. B. DOUGLAS, M.D., NEW YORK.

More frequent than any other disease, more widely distributed, and more destructive to usefulness and happiness, if not to life, is that we have spoken of as causing catarrh. And what is the disease? has been earnestly asked a thousand times. What causes such wide destruction? Has it a specific micro-organism? I think not. Is it a blood disease? No. Can it be cured? Yes. Is it difficult to cure? Not specially. How should we go about it? Remove the cause. What is the cause? Now we have arrived at the starting point; our duty, as surgeons, is to find that cause. Where shall we look? First in the mouth and throat. Here we shall probably find the index which points toward the cause. Observe the tongue, the fauces, the tonsils, and the posterior and lateral walls of the pharynx. A typical case of "catarrh" would show a relaxed uvula, enlarged tonsils, follicular pharyngitis, and thickened and inflamed tissue back of one or both posterior pillars of the fauces. There would be some hoarseness, with a tickling and tendency to cough. Examine, if you please, the larynx; you will find the vocal bands slightly reddened, the whole larynx mildly congested. Look into the superior pharynx. Here is more trouble. The adenoid growth is enlarged; the posterior ends of the turbinate bodies are hypertrophied; the septum is thickened, and the whole passage is bathed in a thick, tenacious, muco-purulent fluid. Examine the nose anteriorly. The inferior turbinate body is enlarged, the septum more or less deflected. In one or both sides you may see above the inferior body a mass filling the fossa and pressing upon the septum. It is exceedingly sensitive, and the mucous membrane generally is congested and hyperæsthetic. Cocaine solution (ten per cent.) applied, blanches and contracts the tissues about the lower turbinate body, and reveals more clearly the middle turbinate, which is still enlarged though under the full contractile influence of cocaine. If we attempt to pass a probe between the body and the septum, we find them in persistent contact—often adherent—and it causes severe pain, often reflected to the supraorbital region, but especially intensifies the habitual pain in the head, wherever it may have been.

The history of this case, as given by the patient previous to examination, is about as follows: frequent and easily acquired cold in the head, pain over the eyes, in the temples, and in the lateral portion of the occiput; eyes watery, sometimes painful, with difficulty in seeing distinctly. The hearing is not so acute as it should be, and there is a buzzing or roaring in the ears. The throat is frequently sore; breathing through the nose is difficult or impossible; and there is mouth breathing, especially at night. The tonsils swell and occasionally suppurate. The stomach is out of order, the bowels are constipated, the liver is torpid, and there is a general tired feeling, with more or less pain of a neuralgic character.

Such cases we see very often. It is difficult to believe the little mass we saw pressing the septum (in spite of the persuasive cocaine) to be the cause of all this suffering. But I am persuaded that the hypertrophied middle turbinated body is capable of more mischief, can cause more suffering, directly and remotely, than any other mass of its size in the human body. It will not contract—cocaine has proved that—it must be removed. We anæsthetize it as thoroughly as possible; then, with scissors adapted to the work, shear off such portion as must come away in order to leave the space clear after the parts have healed. Do not cut away any more tissue than is absolutely necessary, but be sure you get just enough. We can not cut at the farther end and must twist off the mass with forceps. This causes some pain, differing greatly with different people, but not so severe as that of the extraction of a tooth. A pledget of cotton wound loosely upon an applicator, moistened in a solution of acetotartrate of aluminum (a drachm to the ounce), and perhaps fortified in its hæmostatic power by a solution of perchloride

of iron, is inserted where the tissue has been removed, and a cotton tampon placed in the nostril anterior to the first; this latter cotton to be changed as often as it becomes moist; the former may remain twenty four hours or longer, as alum is one of our best antiseptics. This operation is the one most frequently required, but any persistent contact of surfaces in the nose that ought not to touch will certainly cause trouble and must be relieved. Herein lies the key to successful treatment of catarrhal affections—*remove the cause.*

In reviewing older methods the contrast is very marked. Eighteen years ago I was taught by one of the best specialists in this country to swab out the throat with a solution of silver nitrate, and make similar applications to the lower turbinated bodies if they were thickened. I regret to say that that man—conscientious and honest—met with such poor results, as he told me, that he determined to give up this special work and devote himself to general medicine, and he is to-day in general practice one of the best.

The evolution of modern methods has been slow and labored, but persistent and successful. In no department of surgery have there been greater improvements than in the treatment of nose and throat diseases. I well remember attending a clinic in Charity Hospital, New York, in 1876, at which Professor Lister did an operation demonstrating his then new theory of antisepsis and disinfection. What marvellous changes have grown from that theory!

We might inquire how a mere contact of surfaces (that ought not to touch) in the nose can cause so much trouble. I answer:

1. The immediate local effect upon two surfaces so sensitive must be irritating, evinced by a tendency to sneeze, by local pain, etc.

2. The nose, being an important organ directly communicating with the brain and all other organs in the head, must be carefully guarded; hence there are numerous reflex irritations resulting from this primary cause.

3. Secretions, which are normally profuse in the nose, amounting to five or six drachms an hour, are retained by this artificial dam, become acrid, overflow their bounds, irritate adjacent parts, and produce congestions and inflammations—*e. g.*, rhinitis, pharyngitis, faucitis, amygdalitis, and laryngitis.

4. By extension of these induced troubles to other organs—the lacrymal ducts, the Eustachian tubes and middle ears, the accessory sinuses, pharynx, fauces, lungs, and stomach. Ninety-two per cent. of cases of otitis media are induced by extension of nasal inflammation. The effort to breathe through an obstructed nostril produces a partial vacuum, acting as a cupping glass, and causing congestion alternating with undue pressure in the tubes and middle ears. Acrid or purulent secretions are forced into the orifices of the tubes by this pressure, and deafness results in many cases.

I have by no means exhausted the list of evils resulting from obstructions in the nose, but I have mentioned enough to call your attention to the importance of the subject and convince you that the ounce of prevention—removing the cause—is worth many times the pound of cure.

Adenoids at the vault of the pharynx (a secondary disease of childhood) must be removed with forceps or curette, and should be done while the patient is under the influence of an anæsthetic.

It is not so important to excise enlarged faucial tonsils as to cure the cause. I rarely find it necessary to cut them, preferring to take away the irritant. The disease is not often inherent in the tonsil. We should punish the culprit and not the victim.

Wrongs are not righted by deploring them, neither are they corrected by counteracting their evil effects. So diseases are not cured by treating their symptoms, or suppressed by doctoring their results. The terms of success are not subject to revision. Modern methods are founded upon a knowledge of cause and effect. Like labor in childbirth, effort may be spasmodic, but the more constant it is the better. Cures are always difficult and never acquired unless we pay the price. We have to deal with organs that are constantly in use, never at rest.

Organs of so much importance as the nose are always protected by Nature in a special manner; but when we consider the excessive exposure to infections—malarial and bacteriological—to dust and noisome gases, to traumatisms and distortions, we wonder only that we are yet alive.—*N. Y. Med. Jour.*

PNEUMATIC TRUSS PADS.—Those who are obliged to wear Trusses have suffered from pads that are supposed to hold up the ruptured parts, and to alleviate the pain thus caused, hard and soft pads have been devised and all proven more or less unsatisfactory.

A pneumatic Truss Pad that is non-collapsible has been invented by G. W. Flavell and can be used on any Truss. It has been found to correct all the difficulties of the old pads and gives instant relief.

One of the new pads should be in every physicians office, and a sample can be obtained at the nominal price of 50 cents, from

G. W. FLAVELL and BRO.,
1005 Spring Garden St.,
Philadelphia, Pa.

THE CANADA LANCET,

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* Dr. J. L. Davison, 12 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P. O. Orders to be made payable to* Dr. G. P. Sylvester, Business Manager, 585 Church St., Toronto.

AGENTS.—Dawson Bros., Montreal; J. & A. McMillan, St. John N.B.; Canadian Advertising Agency, 60 Watling St London. 5 Rue de la Bourse, Paris.

Editorial.

THE NATURE OF PUERPERAL FEVER.

There is no more interesting or important disease to the general practitioner than puerperal fever, and until the day comes, which come it has not yet, when we shall have a clear and full understanding of its cause or causes, speculation and investigation regarding it will not cease.

We take it that our readers have each a theory or theories as to the nature of this ubiquitous scourge, and that they will be interested and informed by a short abstract of a paper on recent bacteriological investigation concerning the nature of the disease, read by Wm. T. Lusk, M.D., of New York, before the section on Gynæcology of the College of Physicians of Philadelphia.

Not many years ago it was discovered that the vaginal canal abounded in micro-organisms. Without stopping to consider the nature of these organisms, as to whether they were pathogenic or non-pathogenic, the members of the medical profession vaulted over one another to devise some means of getting rid of these pestiferous germs.

Dr. Lusk believes with the recent investigators, that the natural micro-organisms in the vaginal canal intensify the acid reaction of the vaginal secretions and render the latter especially unfavorable to the multiplication of the streptococcus, which is the germ that produces puerperal septicæmia. The normal vaginal secretions furnish a soil hostile to all forms of cell growth, and render the latter non-virulent.

The cervical canal of a pregnant woman, he asserts, is protected from the invasion of micro-organisms by the mucous plug. He quotes Walthard's observations, as showing a line of defence between the attacking germs below and the clear portion of the mucous plug above; thus in natural labor the protection of the uterine cavity is complete. Contagious material has to be carried to it from without, but cannot gain entrance on account of the mucous plug. The entire parturient act, furthermore, serves to guard the woman against infection. With the rupture of the membranes a downward current is produced by the escape of amniotic fluid. The descent of the child cleanses the vaginal canal and the associated leucocytosis and increase of vaginal secretion are inimical to the action of the septic germs. Finally, the toilet of the vagina is completed by the passage of the placenta.

The fact that Nature provides this precious means of self-defence, clearly shows that the disturbing methods of disinfection employed before and after labor, under the plea of prophylaxis, are not commendable. The antiseptic douche dissolves the mucus, sets free the imprisoned germs, weakens the resistance of tissue and contributes to the extension of the source of infection.

Dr. Lusk quotes the statistics of several of the maternity hospitals, showing a complete change of front in the management of puerperal cases in many of them within the last year or so. He says that a careful examination of hospital statistics, on the whole, shows that with the abolition of the routine practice of douching, the morbidity is diminished and the mortality statistics are slightly more favorable. He thinks it is probably wisest

to regard parturition as a normal act, and to attach more importance to the general obstetrical management than to a single detail in practice. He also asserts that in most cases infection is conveyed by the hands of the attending physician or midwife. The ideal of obstetric art is to conduct labor without any internal examination or manipulation. In all cases, examinations should be infrequent and only after a careful disinfection is employed, and externally only. He says that throughout the continuance of labor the attendant should remember the circumstances which favor puerperal fever, such as frequent examinations; operations; the artificial dilatation of the cervix; prolapsed cord and extremities, which form highways to the uterine cavity; leaving behind bits of placenta or strips of membrane; impaired vitality of maternal tissue from pressure; retention of clots from displacements; lowered vitality from hæmorrhage from the long continuance of labor; from deep wounds; from eclampsia; from complicating diseases and from unhealthy sanitary surroundings. Many of these dangers, he said, are avoidable and are the result of slovenly practice.

He said in stating conclusions: "I reserve to myself the privilege of changing my views to-morrow if it seems to me new observations should make a change necessary. But at present it cannot be too strongly insisted upon that a lessened death rate must for the most part follow the lines of improved midwifery practice. The unquestioning child-like faith in the indiscriminate use of the douche and curette as a panacea against the consequences of ignorance in the lying-in room, is a curious phase in the working of the human mind."

He therefore claims that an injection of weak microbicide solutions will not kill the streptococcus germ, while a strong solution acts only upon the surface, where it likewise kills the tissue, washes away the thrombi, and, when the douches are repeated at short intervals, paralyzes the muscular structures.

Regarding the use of the curette, he says that the enemy does not long remain upon the surface; at an early stage it has already penetrated the underlying tissue. And the curette as employed destroys the barrier formed by the leucocytes and opens the door to the enemy. Mild cases are thus frequently converted by this process into virulent ones.

We have always entertained and have expressed freely and vigorously the views expressed in Dr. Lusk's paper. There is no safer teacher than clinical experience carefully observed and noted, and we are as positive now as heretofore that Nature is not prone to mistakes.

We have not forgotten the painful exhibition of the members of the American Medical Association, some years ago at the Chicago meeting, when the Bergeon treatment of pulmonary tuberculosis was successful in curing the most advanced cases of phthisis, and when the vagina in its normal condition was discovered to be the hotbed for the development of the most virulent micro-organisms of all kinds. These contemporary crazes became at once epidemic. The one ephemeral, the other more difficult to disprove; hence it continued to spread until it had reached a point that became dangerous. It was first advised that the vaginal douche should be employed after labor only; this did not satisfy some of the would-be famous obstetricians, so they ventured a step further in advance, and advised that the douche should be used prior to labor, as well as afterwards. Then came the assertion that, to obtain good results, the vaginal douche should be used several days before the commencement of labor, to be certain that the canal was entirely rid of the micro-organisms. Then followed the intra-uterine douche at the completion of labor, with antiseptic solutions. It was then thought best to employ the intra-uterine douche for many days after the confinement. The climax in obstet-

rics was not reached, however, until the sharp curette was employed vigorously to the endometrium as soon as labor was entirely completed. We next expected to hear of the catheterization, douching, curetting and plugging of the Fallopian tubes. These doubtless escaped punishment because the procedure would be an exceedingly difficult one. Having reached the extreme limit of obstetrical folly and meddlesome midwifery, a halt was called and the profession began to think of retracing their steps.

If these so-called progressive obstetricians had taken the pains to consult the statistics of the country doctor or midwife, they would not have rushed to such a foolish extreme. They would have discovered that the old practitioners who had delivered women by thousands, never possessed a syringe, curette, or anything of the kind, never used bichloride solutions, or any other antiseptic solution for any purpose, and who, as a result, never had a case of puerperal septicæmia. They were not troubled with the streptococcus, or any other pathogenic germ ; and their obstetric practice was never followed by death from this cause.

CHOLAGOGUES.

It would appear that the new teachings regarding the action of cholagogues have been all wrong, at least the results of experiments on animals go to show that the various substances which our forefathers, fathers and ourselves looked upon with the eye of simple faith as bile compellers, are simply inert in that direction, if not actually preventive. Thus at the last meeting of the Berlin Medical Society, Herr Stadelman gave, *Med. Press*, the conclusions arrived at from a large number of experiments on animals, extending over a period of five years. In all cases complete biliary fistulæ were established in dogs, and it was only when convalescence was thoroughly established that the experiments were begun. Almost the whole of the supposed cholagogues were absolutely inert as regarded the increase in the secretion of bile. Water alone had no effect, whatever the quantity given, whether 500 or 2,000 cm., or whether hot or cold. The drugs experimented with were taken from three classes, such as have no cholagogue action, *i.e.*, the alkalies and their salts, sod. bicarbonate, common salt, sod. sulph., artificial Carlsbad salt, sod. phosph. potass. tart., magn. sulph., potass. carb., pot. sulph. Scarcely any change was produced by any of these preparations ; with large doses the secretion was rather diminished. The drastic purgatives were next tried : these were gamboge, jalap, aloes, rhubarb, cathartic acid; podophyllin, senna, and calomel. They had no cholagogue action ; sometimes the secretion was increased, sometimes diminished; it frequently remained the same, so that even when the cathartic action was considerable, the quantity of bile remained the same. Various substances were next tried, amongst them alcohol and olive oil, and from these a diminution rather than an increase was observed. The next series of drugs were such as diminished the secretion of bile, such as pilocarpin and atropin. Whilst the action of pilocarpin was doubtful, that of atropin, he was of opinion, was certainly in the direction of diminishing the flow. The next class was that of drugs of doubtful action, and included anti-febrine, anti-pyrine, caffeine, diuretine, and santonine. In general the action in this class was uncertain, little pronounced, and doubtful. In the next class were the pronounced cholagogues, sodium salicylate, and the biliary acids. Sod. salicylate sometimes produced an extraordinary effect, increasing the flow 60 to 70 per cent. for several hours —even as long as 24. Sometimes the effect was more marked and the action was somewhat uncertain. He gave the animals either their own bile or ox-gall, or the biliary acid

suets in pure preparations. He always found a considerable increase in the quantity, and it was remarkable that those biliary acids produced the greatest effects that were foreign to the animal. Glycocholic acid acted much more powerfully than taurocholic. When a large quantity of taurocholic acid was given to an animal, it was excreted along with the bile. In doses of 4 to 5 grms. the increase was almost always 100 per cent., and if the quantity was still increased an increased flow, even up to 120 per cent. could be obtained. The larger the dose the greater the effect, and not only was the bulk increased but that of the solid constituents, and especially the biliary acids. He had no hesitation in pronouning the biliary acids to be most powerful certain cholagogues; they occupied a distinct position, as they increased the formation and of course the flow of biliary acids, whilst the others only increased the flow of the watery constituents. These effects as regarded sodium salicylate and the biliary acids were previously known, Prevost, Pinet, Lewascheff, and others had studied the action of the former before him. Most people were also convinced of the action of the biliary acids, and the only service he had performed was to place the action on a scientific basis.

These experiments appear to show that, while most of our so-called cholagogues are of no value, many of them instead of hastening the flow of bile, retard it, and that all our ideas regarding them are out of joint.

But the evidence of clinical experience in regard to their utility is so strong that, to the practical mind, the experiments on dogs with fistulæ, *et al.*, may go to the dogs. No one who has, in his own person, or in that of a patient, seen the bile flow after a mercurial followed by a saline, can for a moment doubt the value of our old friends the cholagogues, and no amount of experimentation and scientific research will drive them from the ground they have so long and so profitably occupied.

MEDICAL MALPRACTICE.

In the past Surgeons have had a practical monopoly of the unpleasant experience of being sued for malpractice.

That this condition of affairs may undergo a change is indicated first by the suit now before the courts in Indiana in which the plaintiff alleges that the defendant physician treated his wife for a heart disease which never existed and overlooked in his treatment a condition which ought to have been diagnosed, and which, if recognized might readily have been cured.

Another case before the Supreme Court in Brooklyn is of interest. Dr. Boyden, under the direction of the Board of School Commissioners, vaccinated a child, and the child shortly afterward developed tetanus, from which it died. The only question which the Court instructed the Jury they were to consider was whether the vaccination was performed in the manner generally practiced by physicians; or, as the Court expressed it, "whether Dr. Boyden exercised the care which a doctor should exercise in the operation of vaccination to prevent any harm arising therefrom."

The testimony was to the effect that Dr. Boyden did not wash the arm nor use antiseptics prior to the vaccination. In this practice he was supported by a number of medical witnesses, who testified that they never washed the arm, and did not regard it as necessary, inasmuch as the abrasion preparatory to the rubbing in of the lymph was in itself a cleansing process removing everything infective; others claimed that they always washed the arm.

From the evidence it was for the Jury to decide what was the usual practice and whether Dr. Boyden departed from it.

The Jury stood, as we are informed by the *Brooklyn Medical Journal*, eleven for the plaintiff, and one for the defendant. The

point, we are told, upon which the eleven based their opinion was that Dr. Boyden in abrading the skin dipped the ivory point in the glass of water and then rubbed in the lymph, and that this being constantly repeated, using the same water, was liable to produce contamination.

There was not the slightest evidence adduced to support this theory, but the uncertainty of the result in Jury trials received another confirmation. The ivory point was taken directly from the case as received from a reliable vaccine Co., and dipped in the water before it touched the arm of the child to be vaccinated.

The charge of Judge Van Wyck is said to have been a model one, displaying a thorough grasp of the subject and absolute fairness, but in spite of it the Jury disagreed as above stated.

In these days Heaven help the professional man whose interests are at the mercy of Patrons, Grangers or Knights of Labor!

THE LATE DR. RAE.

It is our sad duty to notice the demise of Dr. Rae of Oshawa, which took place on the 8th ult., at his home.

His death was very sudden, as he had been attending to his professional duties only the evening before. Pneumonia, followed by rapid heart failure, was the cause. Dr. Rae was one of those men who are an honor to their profession, being beloved by all—rich and poor alike.

He was born at St. John, N. B., in 1833, and removed to Ontario when he was very young. He graduated in medicine in 1865, and has practised ever since in Oshawa. He was a prominent man in municipal affairs, and was mayor of Oshawa for some ten years.

As surgeon to the 34th Battalion, he was well known to the military men of our country.

But it was as member of the Provincial Board of Health that he was best known to the profession, having held that position from the time of the organization of the Board till the time of his death.

Only three weeks before his death, he was appointed Registrar for the County of Ontario, which his friends hoped would secure for him the much needed rest from his onerous professional duties.

We beg to extend our sincere sympathy to his widow and sorrowing children.

QUEEN'S UNIVERSITY.—At a meeting of the medical faculty of Queen's College appointments were made to fill the vacancies caused by the deaths of Drs. Fenwick and Saunders, as follows:—Dr Garrett will teach obstetrics and gynaecology; Dr. Herald, clinical medicine; Dr. Anglin, clinical surgery; Dr. Campbell, materia medica; Dr. D. V. Sullivan will be demonstrator of anatomy; and Dr. W. T. Connell will teach sanitary science.

THYREOID EXTRACT IN THE TREATMENT OF MYXEDEMA.—In the *Brit. Med. Jour.* there is an article on this subject by Mr. George R. Murray, who remarks that, when thyreoid extract was first suggested by him as a remedy for myxedema, two important questions were raised:

1. Can myxedema be completely cured?
2. Will not the disease ultimately return, even if the use of the remedy is continued?

In answer to these questions, he says, evidence will be brought forward to show that myxedema can be cured, and that it does not return when the use of the remedy is continued. It is necessary, however, to be quite clear as to terms. Myxedema is a symptom or combination of symptoms of loss of the function of the thyreoid gland. In the idiopathic form it is a symptom of chronic interstitial thyreoditis, just as anasarca may be a

symptom of renal disease or ascites of hepatic disease. The myxedema can be cured, although the chronic interstitial thyreoiditis still remains. As myxedema is thus a symptom of thyreoid inadequacy, it occurs not only as a result of removal or of fibrosis of the thyreoid gland, but also in rare cases in consequence of other diseased conditions of the gland.

CONTRAINDICATION IN THE USE OF SALOL IN NEPHRITIS.—Dr. James Tyson, writing in *The Univ. Med. Mag*, says:—An experience with two cases has led me to think it worth while to make known a more than possible danger in the use of salol in cases of nephritis. The first of these was a very serious case of chronic nephritis, in which, after a time, diarrhœa became so serious as to demand control. Knowing the danger from opium in these cases, I sought some other means than this for the purpose, and advised ten grains of bismuth subnitrate and five grains of salol to be given once, and to be repeated if ineffectual. The second dose was not required, as the diarrhœa promptly ceased, and with it the urine, which had previously been most copious, also fell off, and no measures that we could think of had any effect in restoring its original copiousness. There was not at first suppression, but the quantity gradually diminished until it ceased altogether, and the patient died a couple of days later.

A second case was that of a woman pregnant with her second child, complicated by severe puerperal nephritis, in which the urine was almost solid with albumin, was as black as ink, with altered hæmoglobin, and contained large numbers of dark-granular, pale-granular, and waxy casts, with compound granule-cells. Under rest in bed, nourishment limited to milk and Vichy, which she drank copiously, the color of the urine gradually returned to the natural, and the quantity of albumin was largely reduced. A condition of constipation was gradually substituted by a natural state of the bowels, and later—without evident cause—a looseness of the bowels. For this looseness I ordered ten grains of bismuth and five grains of salol. After the administration of one powder the urine again became black, as first noted, and resumed the other abnormal characters. It did not, however, go on to suppression, and under appropriate treatment was assuming a more natural character, when, fortunately, she miscarried and was delivered of a dead eight-months' child. Afterwards convalescence was rapid.

TAPE WORM.—Nervington accidentally discovered the efficiency of the following combination-*Am. Pract. and News:*

℞—Hydriodate of potass., . . gr. xxxvi.
Iodine, ... gr. xii.
Water, ... ℥ j.
Sig.—Ten drops three times a day.

A COUGH LINCTUS, WITHOUT OPIATE.—*Pract.*

℞—Acid. hydrobromic. dil., ... ℥ j.
Spt. chloroform., ... ℥ j.
Syr. prun. virg., ... ℥ iv
Mucilag. ad., ... ℥ iss.
Sig.—Urg. tuss. ℥ j.

IS there an inebriate neurosis? If the doubters will study the inebriates who appear in the police courts and jails, and the inmates of asylums, the answer will be clear and unmistakable. *Crothers.* The defective degenerates both in appearance, and history furnish abundant facts, far more impressive than any theories, however well presented.

PICRIC ACID FOR BURNS.—It is stated, *Med. Press*, that at the Hospital de la Charité in Paris, the usual treatment of burns has been superseded by the use of picric acid as a lotion, in aqueous solution of about 5 grammes to the ounce. Its virtues are said to have been accidently discovered by a medical student, and that the application not only affords immediate relief from pain but hastens the healing very much.

A New Styptic.—Dr. Roswell Park has called attention in the *Medical News* to the advantages of a combination of antipyrine and tannic acid as a powerful and simple styptic. He came upon this combination accidentally in an emergency and finds it easily applied and very effective. When these two substances are brought together there is formed a gummy, sticky substance which may be applied on a sponge. The two may be combined in almost any proportion.

Glycosuria a Product of the Nervous Tension of Civilization.—Some interesting conclusions have been reached by Dr. Worms, of Paris. *Bulletin de l'Academie de Medicine; N. Y. Med, Rec.*, in regard to the increasing prevalence of glycosuria. He says that 7 per cent. of brain workers of sedentary habits have glycosuria. This conclusion is based on one hundred examinations, which is, perhaps, scarcely a sufficiently large number. Only about 5 per cent. of these are of the severe type.

Hydrastis Canadensis for Night Sweats.—Hydrastis canadensis, the *Nat. Med. Rev.* says, is being used with excellent results for controlling night sweats. If a single dose of twenty or thirty drops of the fluid extract does not suffice, then give twenty-five to thirty drops two or three times daily. In nearly every case the night sweats will be overcome. One writer reports seventy out of seventy-three cases of night sweats in tuberculosis where the remedy afforded certain relief.

Asthma.—Pepper.

℞—Ammon. brom., ... ℥ viij.
Ammon. chlor., ... ℥ jss.
Tinct. lobeliæ, ... f ℥ iij.
Spir. æth. comp., ... f ℥ j.
Syr. acaciæ, ... ad. f ℥ iv.—M.

Sig.—Dessertspoonful in water every hour or two during paroxysms.

Remedx for Chills, in Lieu of Quinine.—*N. Y. Polyclinic.*

℞—Liquor potassæ arsenitis,
Tinct. iodinii, ... āā ℥ ss.
(15.625 cc) —M.

Sing—Dose for an adult—10 drops in water or milk three times a day.

Bronchitic Asthma.—

℞—Potassii iodidi, ... ℥ ij.
Ammon. carb., ... ℥ j.
Tinct. lobeliæ, ... f ℥ j.
Sp. chloroformi, ... f ℥ iv.
Vin. ipecac., ... f ℥ j.
Infus. senegæ, . . . q.s. ad. f ℥ vj.

M. Sig.—A tablespoonful in a wineglassful of water every four hours.

A Lady Doctor, as we, *Am. Med. Rev.*, are informed upon the reliable authority of a prominent St. Louis physician, was sent for some time since to attend an acouchment for which she had been previously engaged. When the call—an urgent one—was received, the reply was, that she was very sorry, but the patient must get another doctor as she was "engaged having a baby herself, and could not leave the field just then.

Care of Nose and Throat in Measles and Scarlet Fever.—Dr. Clarence C. Rice recommends the use of Seiler's tablets, one; cocaine, four grains; water, two ounces; applied with a simple hand bulb atomizer, throwing a coarse spray, for cleaning the nose. It may also be applied by a nasal douche or poured from a teaspoon or a dropper. As a protective use alboline or hydrastol, one ouce; menthol, thymol or eucalyptol, one grain and spirits chloroform, one-half drachm. To this may be added one-half per cent. cocaine (alkaloid) prievously dissolved in oleic acid (gr. 1 to the minim).

The object of the treatment being to render the secretions alkaline, to kill the bacteria present and to lubricate the membrane and prevent too rapid evaporation. For catarrhal laryngitis he recommends:

℞.—Chloroform, ... ℥i
Menthol . . . . . gr. v.
Camphor . . . . . gr. x.
Hydrostol, q. s. ad . . . . . ℥ i.

This is sprayed into the larynx several times a day.

The Sanitarium at Gravenhurst. — We are glad to know that the Sanitarium for patients suffering from tuberculosis will soon be an accomplished fact. The building is well on its way to completion and will be opened in the autumn. Applications for the position of Medical Superintendent will be received by Dr. N. A. Powell, College St., up to July 1st.

THE COUNCIL EXAMINATIONS.

The results of the recent final examinations of the College of Physicans and Surgeons of Ontario are as follows :—

H. E. Arkell, J. F. Argue, J. H. Allin, G. S. Burt, T. H. Bier, T. C. Bedell, D. Buchanan, W. J. Beasley, J. R. Boyle, A. A. Beatty, T. H. Bell, W. G. M. Byers, W. J. Beatty, George W. Barber, C. H. Brereton, F. X. Boileau, J. F. Baskin, T. H. Blow, G. H. Berry, B. G. Connolly, D. T. Crawford, H. Clare, P. M. Campbell, J. G. Cranston, F. B. Carron, D. A. Cameron, Jennie Drennan, George R. Deacon, J. D. Deacon, Geo. A. Elliott, A. T. Embury, J. J. Elliott, Geo. H. Ellis, C. Findlay, A. E. Gardiner, Wm. Goldie, Charles Graef, Joseph Gibbs, P. G. Goldsmith, J. J. C. Gibson, N. B. Gwyn, A. J. Grant, V. G. Harcourt, W. J. Henderson, C. M. Heydon, F. W. Hodgins, A. G. Hodgins, E. S. Hicks, George V. Harcourt, W. W. Jones, J. F. Kelly, J. P. Lee, D. P. Lynch, George Musson, J. S. Morris, J. A. Marquis, J. A. Malloy, W. J. O. Malloch, A. H. Macklin, H. G. Murray, A. A. Metcalfe, C. S. McKee, A. S. McCaig, W. A. McIntosh, J. R. McRae, S. H. McCammon, J. F. McConnell, W. H. Nichol, J. H. Oliver, J. R. Phillips, J. W. F. Purvis, E. L. Robinson, J. H. Rivers, E. L. Roberts, J. A. Rannie, H. H. Ross, Christine Sinclair, J. A. Sutherland, I. G. Smith, F. C. Steele, W. J. Stevenson, C. H. Thomas, N. J. Tait, J. S. Thorne, Annie Verth, A. Webb, S. H. Westman, E. B. White, B. E. Webster, W. H. Weir.

In cases of severe injury to the fingers by laceration or contusion, put the entire hand into a very ample soaking-wet dressing. Do not even trim off a piece of flapping skin. Incision for drainage is all that is allowable until healing is very well under way or even quite complete. You may then look over the ground and see whether it is worth while to sacrifice anything. A half inch of *boneless* finger may be of incalculable value to its possessor.

PUBLICATIONS OF

LEA BROTHERS & CO.

PHILADELPHIA AND NEW YORK.

CANADIAN REPRESENTATIVES.

McAINSH & KILGOUR.

A Text Book on Nervous Diseases—Edited by F. X. Dercum, M.D., Clinical Professor of Diseases of the Nervous System in the Jefferson Medical College, Philadelphia. In one handsome octavo volume of 1046 pages, with 341 engravings and 7 colored plates. Cloth, $6.50; leather, $7.50. Net.

This goodly-sized volume embodies the work of twenty-two leading authorities in neurology in the different and special lines of their individual fitness for the same. The general arrangement is systematic and practical.—*Medical Record*, New York.

Diseases of Infancy and Childhood.—By J. Lewis Smith, M.D., Clinical Professor of Diseases of Children in the Bellevue Hospital Medical College, New York. New (8th) edition, thoroughly revised and re-written and much enlarged. Handsome octavo of 983 pages, with 273 illustrations and 4 full-page plates. Cloth, $4.50; leather, $5.50.

The leading position achieved by Smith on children as the standard text-book and work of reference on its important subject is shown by the demand for eight editions. In the present issue the subject of surgical diseases of children has been added. The new edition will be used by students and practitioners as a complete and authoritative guide to the surgical as well as the medical aspect of the diseases of children.—*Canada Lancet.*

A Text-Book of Practical Therapeutics—With especial reference to the application of remedial measures to disease and their employment upon a rational basis. By Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. With special chapters by Drs. G. E. DeSchweinitz, Edward Martin and Barton C. Hirst. New (fifth) edition thoroughly revised and much enlarged. In one octavo volume of 740 pages. Cloth, $3.75; leather, $4.75.

The fifth edition of this valuable book in as many years indicates in a convincing manner the high esteem in which it is held by the profession in America. The editor has a high reputation, not only as a teacher, but also as an experimental pharmacologist. We find, therefore, as we might expect, that the physiological action of all the drugs as far as it is known is very clearly stated. Above all things, however, the work is a practical one and the busy practitioner will find that all information respecting practical therapeutics is here made easy of acquisition.—*Montreal Medical Journal.*

The Pathology and Treatment of Venereal Diseases.—By Robert W. Taylor, A.M., M.D., Clinical Professor of Venereal Diseases in the College of Physicians and Surgeons, New York. In one very handsome octavo volume of 1002 pages, with 230 engravings and 7 colored plates. Cloth, $5.50. Leather, $6.50.

In the treatment nothing has been neglected. In its completeness the book leaves almost nothing to be desired. It is a veritable storehouse of our knowledge of the venereal diseases. It is commended as a conservative, practical, full exposition of venereal diseases of the greatest value.—*Chicago Clinical Review.*

Dunglison's Medical Dictionary—Containing a Full Explanation of the Various Subjects and Terms of Anatomy, Physiology, Medical Chemistry, Pharmacy, Pharmacology, Therapeutics, Medicine, Hygiene, Dietetics, Pathology, Surgery, Bacteriology, Ophthalmology, Otology, Laryngology, Dermatology, Gynæcology, Obstetrics, Pediatrics, Medical Jurisprudence and Dentistry, etc. etc. By Robley Dunglison, M.D., LL.D., Late Professor of Institutes of Medicine in the Jefferson Medical College of Philadelphia. Edited by Richard J. Dunglison, A.M., M.D. New (21st) edition, thoroughly revised, greatly enlarged and improved, with the Pronounciation, Accentuation and Derivation of the Terms. In one magnificent imperial octavo volume of 1206 pages, with Appendix up to 1895. Cloth, $7.00; leather, $8.00.

Any book that from public demand and appreciation reaches a twenty-first edition may safely be recognized as a credit to both its author and publisher. Pronunciation is now for the first time introduced. It is indicated by a simple and obvious system of phonetic spelling, fully explained in the introduction. A vast amount of information will be found in the compiled tables, etc. The work should be in the hands of every student and physician, and will be found a most useful companion.—*Canadian Practitioner.*

Sent Carriage Prepaid on Receipt of Price.

McAINSH & KILGOUR,

CONFEDERATION LIFE BUILDING,

TORONTO.

The Canada Lancet.

VOL. XXVIII] TORONTO, JULY, 1896. [No. 11.

CLINICAL NOTES ON METHODS AND NEW REMEDIES IN THE TREATMENT OF DISEASES OF THE UPPER AIR PASSAGES.

By Walter F. Chappell, M.D., M.R.C.S. Eng., Surgeon to the Manhattan Eye, Ear and Throat Hospital, New York.

These observations are taken from histories of cases seen in private and hospital practice during the past two years. They are intended to place briefly before the general practitioner the most approved methods and remedies which, in the special experience of the writer, have been the most satisfactory in the treatment of the affections under consideration. The results from other remedial measures have been carefully compared and tested, so that, only those drugs which were found to possess superior value are mentioned.

New drugs employed:—Camphoric Acid, Mono—and Para—chlorophenol, Pyrozone, Lysol, Tannigen, Argentamin, Thiol, Guaiacol, Alumnol, Aluminum Aceto-tartrate, Ichthyol, Creasote carbonate, Tartarlithine, Cocaine saccharinate, Antipyrin, Benzoinol, Ferropyrin, Iodic acid and Ethyl Bromide.

Of these, Tannigen, Lysol, Iodic acid and Thiol, did not prove to be of special service. The other drugs are worthy of distinct recognition and will be considered under the diseases which were most relieved by them.

For brevity and clearness the subject may be considered under the following divisions. 1st, Nose and Accessory Sinuses. 2nd, Pharynx. 3rd, Larynx and Trachea.

1. *Disease of the Nose and Accessory Sinuses.*

The methods used in the treatment were douches, sprays, applications, operative measures and semi-fluid preparations. The latter are formed by the combination of 3 parts benzoinol and 1 part oxide of zinc ointment, well rubbed together and forming a white creamy base, to which may be added any remedy that the nature of the case indicates. This oily base will be spoken of as oleum hydrocarbon co. whenever its employment is recommended.

(*a*) Acute rhinitis or influenza. Without doubt this is one of the most frequent nasal affections to claim our attention and often with indifferent success. To be of any marked service the treatment must be commenced within twenty-four hours of the onset of the symptoms, and internal

remedies and local measures adopted. Rest and even temperature are desirable, but of course cannot always be obtained.

Considerable relief and decided arrest of symptoms may be expected in every case from one of the following prescriptions:—Tablet triturate rhinitis, of which there are several strengths, one containing Camphor $\frac{1}{4}$ gr., Belladonna Fl. Ext. $\frac{1}{8}$ gr., Quiniæ Sulph. $\frac{1}{4}$ gr. in each tablet is of the most service. One tablet should be administered every 15 minutes, until eight have been taken, then one every hour or two as required; or Pil. phenactin, camphorae et atropinae sulph., as first recommended by Dr. A. H. Smith. Each pill contains phenactin $3\frac{1}{2}$ grs., camphora $\frac{1}{2}$ gr., atropina sulph, $\frac{1}{300}$ gr., and should be taken once in four hours.

The following powder is of considerable value in persons of a plethoric habit or rheumatic tendency:—

℞. Pulv. glycyrrhizae co. . . . . ℥i.
Sodii bicarbonatis. . . . . ℥iii.
M. ft. pulv. no. 6. . . . . .

Sig. One every half hour until finished and the same number repeated in six hours if required.

The semi-fluid preparations are especially suited for applications to the acutely inflamed mucous membranes of a common cold. They should be warmed before using, by placing the vessel containing them in warm water, and then applied by means of a camel's hair brush, a dropper, or poured from the tip of a small teaspoon.

One of the folloming combinations is very serviceable:—

Liq. Plumbi subacetatis gtt. x. or boric acid grs. x. to one ounce of the oleum hydrocarbon co. When the nasal discharge is profuse and accompanied by excessive sneezing, applications in the form of snuffs give marked relief. One of the best is

℞. Camphor . . . . . ℥ss—℥i.
Bismuth, sub. nitrat. . . . . .
Pulv. acaciae. . . . . āā ℥i.
M. ft. snuff. . . . . .

Sig. To be used every four hours until relief is obtained.

Hay fever and intermittent rhinorrhœa from the similarity of their symptoms to those of influenzal colds will be considered under this heading. Intermittent rhinorrhœa appearing at any season of the year, is in the opinion of the writer most frequently of malarial origin. Our best results have followed full doses of quinine administered during the attacks, and the persistent use of arsenic given in increasing doses between the attacks. The treatment of hay fever will depend on whether advice is sought before or during an attack. Many remedies may benefit this affection, but in the writer's experience, the most uniform and decided results are obtained from the use of cinchonidia sulphate. Its influence on the vaso-motor system is in many cases remarkable. It produces a dryness of the naso-pharyngeal membrane almost equal to the effect of belladonna. The writer has seen several patients in whom six grains of cinchonidia given during 12 hours produced an intolerable dryness and thirst. The distress was so great in one case that the hay

fever was preferred to the effects of the remedy. When possible, treatment should be commenced ten days before the usual date of the attack, with 5 grains doses of cinchonidia sulphate three times a day. On the day preceding the usual date of attack, 20 grains should be administered, and the dose increased 10 grains daily until the symptoms are controlled. If the attack does not appear or is controlled, the dose should be gradually diminished. If the patient is not seen until the attack has begun, full doses of the remedy should be given and increased as required. Large doses, or the continuous use of this remedy may cause some nervous disturbance, similar to those produced by quinine. Fifteen or twenty drops of dilute hydrobromic acid given in water, will control the symptoms and should be given when the large doses are reached.

Constriction of the chest and other asthmatic feelings which appear as a later symptom in hay fever patients are greatly relieved by the administration of sulphur. It may be given in solution with cream of tartar and syrup, or in capsules containing ten or twenty grains, every half hour until the attack subsides. Considerable griping and looseness of the bowels follow its administration in some patients. The writer deprecates the use of cocaine by hay fever patients, as many persons suffering from the cocaine habit date their downfall from a cocaine spray prescribed to relieve their nasal distress during an attack of hay fever. Very little relief can be expected from local applications alone, but to supplement internal medication they are of some value. An application of the following combination, acts as a protective to the mucous surfaces and is very cooling.

℞ Mentholis . . . . . .
Camphoræ . . . . . grs. v.
M—Rub together and add . . . .
Olei. hydrocarbon co. . . . . ʒi.
M—Sig. Use with a camel's hair brush 3 or 4 times a day.

(*b*) Hypertrophic Rhinitis. This is one of the most frequent causes of nasal obstruction, and runs either a sub-acute or a chronic course. In the former the hypertrophy is due to engorgement of the vessels and diatation of the sinuses; in the latter, some fibrous change takes place. Local medication in the form of sprays is useful in the more recent cases, such as a half per cent. of camphoric acid in watery solution or one per cent. of menthol in benzoinal, continued for several weeks. If considerable discharge accompanies the hypertrophy the spraying should be followed by applications of tannic acid or iodine in a solution of oleum hydrocarbon co. Occasionally the hypertrophy involves not only the mucous membrane covering the turbinated bodies, but also that of the septum. In many of these cases, sprays, applications, or operative measures, seem to aggravate the trouble, as it is gouty or rheumatic in origin. The writer has seen patients who discharged at intervals small, chalky deposits from the nasal mucous membrane. Remedies to correct this condition are indicated, and tartarlithine is one of the best.

When the hypertrophy becomes fibrous in character, minor surgical measures or some caustic must be selected. Powdered nitrate of silver fused to the size of a small bead on the point of a fine applicator is the

most ready and efficient caustic. A two per cent. solution of cocaine should first be spread over the mucous surface and the application made in small spots at frequent sittings. Very slight pain or inflammation ensues, and there is a minimum destruction of glandular tissue.

(*c*) Atrophic Rhinitis.—Popularly termed "bad smelling catarrh." Cleanliness is the cardinal rule in the treatment of this affection. Hand sprays are not of much service as they reach only the anterior part of the nasal fossae and frequently leave large masses of thick mucous in the posterior part. For thorough cleansing the nasal douche is necessary. In prescribing the latter, the following directions should be given, as improperly used the douche may produce inflammatory action in the middle ear.

Directions for using the douche or nasal cup:—

1st. Warm the fluid used and apply vaseline to the nasal tip.
2nd. Put the nasal tip in the nostril that has the most obstruction.
3rd. Hold the breath, throw the head slightly backward and allow the fluid to flow gently into the nose.
4th. If you feel that you must breathe, take the tip away and after a few moments begin again.
5th. While using the douche, don't attempt to walk, talk, cough, swallow, sneeze or become excited in any way.

Any alkaline solution may he used in the douche and after the mucus has been thoroughly removed, some stimulating application should be made. For several years iodine has been used almost exclusively in my service at the hospital, as repeated tests proved it to be decidedly more beneficial than any other remedy. Three grains of pure iodine was added to an ounce of oleum hydrocarbon co. and applied to the mucous surfaces night and morning with a camel's hair brush. Persistent use of this remedy relieved most cases.

In some patients scattered spots of ulceration appear on the septum and turbinated bodies. On these, occasional applications of 50% solution (also full strength) of ichthyol, and the daily use of a 5%-10% solution of ichthyol will prove very serviceable. For a year past, monochlorophenal has been on trial, and promises to surpass in value other remedies in atrophic rhinitis. A 10-25% solution in glycerine should be smeared over the mucous membrane once or twice a week. Considerable smarting follows, but lasts only a few moments. For home use a one-half to one per cent. solution in oleum hydrocarbon co. is applied twice a day. In many cases that had not previously received any treatment, and in several where iodine and ichthyol had failed, the use of monochlorophenol produced immediate and remarkable results. When the ulcerations on the septum are especially large and do not respond quickly, a 25% solution of monochlorophenol or the pure drug may be employed. It should be carefully applied in small quantities to small surfaces and preceded by the use of cocaine; considerable lachrymation and frontal headache may ensue, but are only transient. Any treatment to be successful must be continued for several months.

(*d*) Epistaxis.—Recurrent nose bleed is usually due to minute abrasions of the mucous membrane at the anterior and lower part of the septum.

The volume of blood which may flow from them is surprising. Treatment must be directed for the arrest of an acute hemorrhage and the prevention of its recurrence. Holding the nose between the thumb and index finger, the former making firm pressure over the bleeding point is usually successful if the patient at the same time assumes the horizontal position. Should this method fail, one of the following haemostatics may be used: Ten per cent. watery solution of aceto tartrate of aluminum, 3% of pyrozone, 10% of pure powder of ferropyrin or antipyrin-salol. The latter is made by filling a test tube, one third with equal parts of antipyrin and salol. It is then heated over a spirit lamp until the mixture is first transformed into a clear liquid, and later takes a well defined brown color; when the latter color is reached the liquid is ready for use, but must be allowed to cool sufficiently before applying. The solution can be kept warm by placing the test tube in a glass of warm water.

All solutions of haemostatics should be applied with a dropper, or spray. In my experience, plugging the nose with absorbent cotton is very undesirable, as a secondary hemorrhage always follows its removal. Sometimes all of these recommendations prove useless and we are obliged to apply the cautery directly to the bleeding point. Considerable care is necessary to secure the exact heat of the cautery. After the hemorrhage is under control, a short time should elapse, and then the bleeding point sought for and touched with the finest cautery point or powdered nitrate of silver fused on an extremely fine applicator. The latter method in my practice has been very efficient. As a supplementary treatment, some of the oily preparations are very satisfactory, such as tannic acid, rubbed up with oleum hydrocarbon co. The writer has seen severe cases of persistent recurrent nose bleed yield alone to the use of semi-fluid preparations, when they were commenced between the attacks.

(*e*) Frontal Maxillary and Sphenoidal Sinusitis:—Acute inflammation of these sinuses has been remarkably frequent since the last visitation of the grippe. When recognized early, medicinal measures will successfully combat further progress of the inflammation. External and internal heat locally applied is immediately indicated, and should be used on the cutaneous surface in the region of the affected sinus, and by a hot alkaline nasal douche. A tense feeling of pricking and pain are usually felt over the inflamed sinus, and great relief from this may be obtained by the persistent application of a counter irritant, such as:

℞ œ sinapis seminis gtt. xv. menthol and camphor āā ʒss. Sig. Apply as directed. In using this solution over the and frontal maxillary regions, the eyes should be protected. When the sphenoidal sinus is affected there is frequently intense pain just below the occiput, which is best relieved by keeping the back of the head on a bag of very hot water or salt. Sometimes the inflammation progresses to suppuration, and requires the usual surgical measures for relief.

(*f*) Folliculitis Alae Nasi. Although a very simple affection, it eauses considerable annoyance and discomfort. Most of the cases are seen in children suffering from a more or less acute opthalmia, which has spread through the lachrymal canal into the nasal cavity. The dried secretions must first be removed, and then a 10% solution of nitrate of

silver or monochlorophenol applied. Powdered boric acid is given for home use, to be dusted on three or four times a day, with directions not to wash the parts for a few days.

2. Diseases of Pharynx.

(*a*) Naso-pharynx. The usual affections in this region are post nasal catarrh and adenoid growths. The hypersecretion of post nasal catarrh is frequently due to nasal obstruction, and relief must be sought from some of the methods already considered. Increase of adenoid tissue is also a prolific source of post-nasal dropping. Occasionally, during an influenzal cold, a pharyngeal tonsil of normal size will share the general inflammatory condition of the surrounding region, swell considerably, and exude a quantity of thick, yellow mucus. Warm, alkaline, post-nasal douches are indicated until the acute symptoms subside; then applications, such as 10% solutions of alumnol or monochlorophenal, continued for some time until the secretion is arrested and the gland resumes its normal size and appearance. Follicular hypertrophy and congested vessels also promote hypersecretion in this region. Daily and persistent application of a 2% solution of zinc chloride will give very decided relief. A powder composed as follows is extremely serviceable. It does not change chemically, will not become lumpy, is non-irritating and not offensive to the taste.

℞. Argent. nit. . . . . grs.x-xl.
Potass. sulph. . . . . ℥i.
Bismuth subnit. . . . . ℥viii.

M. Sig. Apply behind the soft palate three times a week. In all cases attention should be directed to the digestion, condition of the liver and bowels and mode of life.

ADENOID GROWTHS.—The methods and details of treatment of these growths depend on the age, temperament, and general condition of the patient, also on the amount of tissue present. When the amount is small and the enlargement slight, they frequently subside under astringent application, or the relief of some nasal obstruction, which accompanies and is partially responsible for their presence. Removal of adenoids in children may be accomplished with or without an anæsthetic. If the adenoid tissue is moderate in quantity and of the soft, gelatinous variety, the index finger, properly used, will shell out all that is necessary. In using the finger it is well to protect it in part with a rubber or leather stall, otherwise some injury may be sustained from the child's teeth. Abundant adenoid tissue requires an anæsthetic, preferably nitrous oxide gas or bromide of ethyl. Forceps and curette are both necessary for complete removal of the growths, and the greatest care must be exercised in their use. If the blade of the forceps or curette is pressed too hard into the parts, an unnecessary amount of mucous membrane will be sacrificed. After removal, a solution of pyrozone, or aceto-tartrate of aluminum, should be made to the bleeding surface, and the child kept quiet and in an even temperature for 24 hours. It is also well to remember that these operations are contra indicated when any symptoms of acute ear trouble are present, and that the presence of chronic aural suppuration necessitates great care in proceeding with the operation. In adults cocaine

anæsthesia is sufficient for the removal of adenoid tissue, and in my experience cocaine saccharinate is preferable for use in all affections of the upper passages. It is decidedly sweet in taste, always antiseptic, causes less pharyngeal discomfort, and equals other preparations of cocaine in anæsthetic properties. Antipyrin and cocaine may be combined when a prolonged anesthesia is required. The forceps and curette should both be employed, and if the amount of tissue is considerable, several sittings should be given for its removal. Care must also be exercised in the use of instruments, and some antiseptic haemostatic applied after each sitting.

(*b*) Oro-Pharynx. The treatment of diphtheria has been so thoroughly discussed in all the journals, that the writer will only state that in his opinion antitoxine serum cannot yet be accepted as the final remedy for the treatment of diphtheria.

Follicular Tonsilitis.—Early treatment is desirable, as many of these cases subsequently become peritonsillar and suppurate. Cleansing sprays and the application of any good antiseptic will cause the disappearance of the follicular secretion and membrane in from 5 to 7 days. This period may be considerably shortened and the constitutional symptoms modified by local applications of creasote carbonate and the administration of two-drop doses of guaiacol every 4 hours. Whiskey and 1/100 of a grain of strychnine sulphate should be given at the same time, as they relieve the extreme exhaustion which is so marked in all cases of acute follicular throat trouble.

Mycosis of the tonsil and pharynx resists many forms of treatment. The cautery point introduced at a white heat destroys the growths in many of the follicles, and twenty-five per cent. solution of pyrozone is also very satisfactory. Occasionally a short change of climate succeeds when all other methods of treatment have failed.

Quinsy or Peritonsillitis.—Unless the patient is seen early it is almost impossible to prevent suppuration. Rest, with external and internal heat, a brisk application of cocaine and arterial sedatives may abort some cases. If the history is rheumatic, full doses of sodium salicylate should be administered, as it frequently limits suppuration and modifies the whole course of the disease? Occasionally the acute symptoms subside leaving a fullness in the pharyngeal wall and tonsil and some bulging of the soft palate. This is really an abscess deep in the tissues which may remain quiescent for several weeks unless incised; sooner or later inflammatory symptoms reappear, and the abscess discharges of its own accord. After incising a tonsillar abscess the cavity should be washed out with hot water. If the opening is large, solutions of pyrozone or peroxide of hydrogen may be used to thoroughly cleanse the cavity. Peritonsillar inflammations are usually dependent on diseased tonsillar tissue in which the follicles are large and deep, also on adhesions of the pillars to the tonsils, leaving deep pockets, which are receptacles for all kinds of decomposing materials. Occasionally the tonsils are completely encapsuled by their pillars, which prevents the escape of tonsillar secretions. Preventive measures should therefore be taken in all cases of recurrent peritonsillitis, the adhesions loosened and the follicles kept free.

FOLLICULAR PHARYNGITIS.—This affection may occur in the acute or chronic form. The former should be treated as an acute follicular tonsillitis. The latter requires prolonged treatment to obtain permanent results. The galvano cautery and strong acids, while very efficacious are inadvisable, as they are apt to produce a dry pharyngeal wall.

Powdered nitrate of silver fused on a probe and applied to a few follicles at each sitting gives the best results and leaves the mucous membrane in a healthy condition. Caustic iodine similarly applied is also very satisfactory. The latter is composed of iodine and carbolic acid crystals, each 120 grains, iodide of potash, 10 grains, rectified spirits, two drachms. Soothing sprays are desirable as adjuncts to the other treatment.

ENLARGED TONSILS.—In children under 15 the tonsillotome is universally used for the removal of tonsils, and preferably Ermold's guillotine. This instrument is simple in construction, without barbs on the fork, and insures the removal of the tonsil without danger of the fork being caught. Two instruments expedite the operation as the moment one tonsil is excised, the second instrument is taken and used on the other tonsil. The child thus has no opportunity to object, which will assuredly be done if an opportunity is given. This supposes that no anæsthetic is employed, which I think can only be necessary in special cases.

In adults removal of the tonsils can only occasionally be necessary. When determined upon, the personal and family history must carefully be considered, and the blood supply of the tonsils and pharynx examined. If there is no contra indication any of the numerous tonsillotomes may be chosen, and 15 minutes allowed to elapse between the excision of each tonsil. Complete removal of the gland should not be attempted, as it is apt to result in an uncomfortable dryness of the throat.

The writer has never used the cautery loop in removing the tonsils, believing that the cicatrix from a burn, causes a permanent dryness of the throat more distressing that the presence of largest tonsils. When it seems undesirable to use the tonsillotome, the frequent application of caustic iodine will sometimes diminish hypertrophied tonsillar tissue.

Haemostatics and antiseptics are advisable after all tonsillotomies.

(*c*) Laryngo-Pharynx. Hypertrophic lingual adenitis. Increase of adenoid tissue at the root of the tongue is frequently overlooked, although it is the most usual cause of fullness and desire to clear the throat. Only a few nodular masses may be present, or several groups of large, pale, flabby masses, which completely fill the glosso-epiglottic fossa, and in some cases overhang the epiglottis and press it backward over the glottis. Any strong astringent will relieve the cases with moderate growths, but something more radical is necessary when the tissue is abundant. In the latter cases, the galvano-cautery gives the best results and should be used when practicable. The epiglottis should be carefully avoided in the use of the cautery, as oedema may result if it is burned. Solid nitrate of silver or chromic acid, may be used but are not so effective. Occasionally the growth is in two large masses resembling enlarged tonsils. The lingual guillotine, suggested by the writer and later improved upon by Dr. R. C. Myles, is the best means of removing large isolated growths.

Occasionally the lingual hypertrophies become acutely inflamed and small yellow secretions fill the follicles; soothing sprays are the only treatment needed as the trouble causes only slight pain on swallowing and disappears in a few days. A collection of varicose veins at the root of the tongue produces considerable tenesmus in this region, and should be treated by the galvano-cautery. Attention should also be given to the digestion.

3. Diseases of Larynx.

The most frequent inflammatory affections of the larynx are either subacute or chronic. The subacute cases are usually caused by cold and are quickly relieved by sprays of one per cent. solutions of alumonol or two per cent. argentamin. Argentamin solutions are very satisfactory for laryngeal sprays as they do not produce the dryness and spasms which usually follows the use of nitrate of silver in the larynx.

In chronic Laryngitis, rest of the voice is of primary importance 5% solution of argentamin or 1% of zinc chloride are about the best applications for the physician's use. For home use, one grain of iodine in an ounce of benzoinal as a spray, is of service. The neoplasms of the larynx are innocent or malignant. The former are usually papillomatous in character, and in adults are easily removed by Grant's guarded forceps. In children this is not so easy and they are apt to recur. Dr. Delavan has recently suggested sprays of absolute alcohol for laryngeal papillomata, and in the writer's experience it is remarkably successful. Tracheotomy is also to be recommended for the treatment of recurring papillomata in children, as physiological rest produces atrophy of the growths. In malignant diseases an early diagnosis is of the greatest importance. If this is made, a complete removal of the larynx is indicated, and may prolong life many years.

When the disease has made considerable progress nothing can be gained from this procedure and tracheotomy gives the most relief.

Tubercular Laryngitis.—The treatment of this terrible disease is curative or palliative. The former is not frequently successful, but in selected cases, curetting and submucous injections of creasote will arrest the disease. Of palliative measures, many remedies will give relief if persistently employed. Thorough cleansing of the larynx is of first importance and alone gives great comfort. Applications of creasote in castor oil, and iodoform in ether are the best remedies for the relief of pain and general laryngeal distress. The automatic syringe and Mizpah dropper are the best means of applying solutions to the larynx. In the later stages of tubercular laryngitis, accompanied by extreme ulceration, 10 per cent. solutions of parachlorophenol give some relief, but cocaine is the only remedy which affords comfort while eating. If the epiglottis is much affected food is apt to drop into the trachea. To prevent this the patient should be directed to flex the chin on the sternum during the act of swallowing. In chronic tracheitis creasote and malto yerbine relieve the cough, and intra-tracheal injections of selected remedies are of undoubted value.

EXTRA-UTERINE PREGNANCY; FOUR AND A-HALF MONTHS; OPERATION; RECOVERY.

BY W. J. GIBSON, M.A., M.D., BELLEVILLE, ONT.

The patient, Mrs. S., was taken ill on September 3rd, with what she termed "cramps." As her bowels had not moved for four or five days, she attributed the pain to constipation, took a dose of salts and applied turpentine stupes. She kept up the hot fomentations for twenty-four hours, when, failing to obtain relief, she summoned Dr. McColl, who on examination found her suffering with general peritonitis. Pulse 120, temp. 101. The abdomen was very much distended and tympanitic, and exceedingly tender to pressure. The rectum was filled with a mass of hardened fæces, requiring the use of a scoop to break it up; after which a large enema was given, with the effect of producing a free evacuation of the bowels. Owing to extreme tenderness, nothing could be ascertained by vaginal examination, more than the fact that the uterus appeared to be crowded forward against the pubes. On being questioned as to the regularity of her menstrual periods, she stated that she had missed two periods, but as this was not an uncommon occurrence, her suspicions as to pregnancy were not excited. In a few days' time the inflammation subsided and the doctor ceased attendance.

One month after this he was again asked to see her, and found her complaining of a great deal of pain in the back and limbs, with some tenderness over the lower part of the abdomen. Bowels had been constipated since the former attack, notwithstanding the constant use of laxatives. Her pulse was very rapid and her temperature slightly above normal. She had become very much emaciated, had not been able to take much nourishment, owing to distressing flatulence which accompanied the ingestion of food. Examination disclosed a tumor in the pelvis which could readily be felt above the pubes. The os uteri was soft and patulous and the whole organ crowded up behind the pubes and in front of the tumor. The condition of the patient was reported to me and I advised her removal to the hospital. I saw her in consultation with Dr. McColl and Dr. Walker. Her temperature on admission to the hospital was 99½, pulse 125. She complained of distress in the stomach, not so much from nausea as from flatulence. There was no pain about the tumor, though it was tender to the touch and seemed to be about the size of a child's head. It extended to within two inches of the umbilicus, and on vaginal examination was found to fill up the whole of the pelvis, the greater part of the tumor being on the right side. The neck of the uterus was soft, the os patulous, and fundus could be plainly felt above the pubes and in front of the tumor. There had been no signs of menstrual flow, nor had there been any passage of shreds or decidua. The breasts were not enlarged. Feeling certain that if pregnancy existed it must be extra-uterine, I passed a sound to demonstrate the position of the organ. The diameter was 3½ inches and the position as above stated. A distinct sense of fluctuation could be

made out in the tumor, and as she had been complaining of chills, with some increase of temperature, I thought that probably we had an abscess to deal with, or, possibly, an enormous hydrosalpinx. Her general condition was such to render abdominal section extremely hazardous, and I therefore proposed, in the absence of urgent symptoms, to get her bowels regulated and the stomach in a better condition. At the end of a week her condition was much improved, bowels moving regularly and the stomach in a state to allow of a fair amount of nourishment. On the eighth day after her admission to the hospital, I determined to explore the tumor, per vaginam.

After carefully preparing the field of operation, I introduced a large aspirating needle on the right side. About four ounces of a watery fluid escaped, followed by an ounce or more of very dark blood, which clogged the needle, and I at once withdrew it. Diagnosis was still doubtful, though inclined in favor of ectopic gestation. Patient was put to bed and suffered no ill effects from the operation, but on the contrary, affirmed that she felt much better. Her stomach was more settled and she began to take nourishment with more relish. Bowels still constipated. No appreciable change in size or condition of tumor.

Four days afterwards, I again used the aspirator, with a similar result. First, a small quantity of watery fluid, followed by blood, about five ozs. in all. As nothing unusual followed, we determined to await developments. From this time on she improved somewhat, rested better, took food more regularly and grew stronger, so that she was able to sit up for a short time each day. At the end of three weeks she was able to walk across her room, though not without assistance. She did not appear to gain in flesh; pulse still rapid, temperature about normal.

On the 18th December she expressed a desire to go home. On being informed of this, I directed that she be not allowed to leave the hospital until I had examined her. In consultation with Dr. McColl and Dr. Walker, I again examined her. The tumor seemed to be larger, and, during my manipulations, I observed a slight movement, which was strongly suggestive of the movement of a fœtus. In a few minutes it was repeated, and I at once pronounced the case one of extra-uterine pregnancy, and asked the other physicians to satisfy themselves as to the movements, which they accordingly did. Dr. Clinton was at this stage asked to see the case, and he also confirmed the diagnosis, which was now unmistakable. The true condition of affairs was explained to the patient and her husband, and immediate operation advised, to which they readily consented. The usual preparations for laparotomy having been made, the operation was performed on December 20th.

Dr. Walker administered the anæsthetic, Dr. McColl and Dr. Clinton assisted me. I made the incision about an inch and a-half to the right of the mesial line, in the hope that the sac would be found to be adherent to the abdominal parietes. On cutting through the peritoneum the sac was found to be perfectly free, no adhesions. It was very thin, and so transparent, that the motions of the fœtus were perfectly visible. I enlarged the incision with the hope of being able to gain access to the tube and ligate it, but fearing I might accidentally rupture the thin sac, I aban-

doned the idea and tried to sieze it with forceps, so as to enable me to stitch it to the abdominal wound after opening it. Unfortunately, it ruptured on the first attempt to seize it, and the contents rapidly escaped, some, in spite of our efforts, getting into the abdominal cavity. I at once seized the extremities of the fœtus and extracted it without difficulty. There followed a tremendous hæmorrhage, which I quickly controlled by instantly shoving my hand full of gauze down deep into the pelvis and against the bleeding placenta. Retaining my hand there to keep up pressure, with the other I packed in large quantities of gauze. The patient had suddenly become blanched and pulseless, and we thought she was dead. Hypodermic injections of brandy, ether, and strychnia were given, artificial respiration restored to, hot applications applied, and, after half-an-hour's anxious suspense, the pulse could be feebly felt at the wrist. In the meantime the cord had been tied as low down as possible and dropped into the pelvis. The child was living, though feeble.

So exhausted was the patient, that we did not dare move her from the table for upwards of two hours. She was then put to bed and carefully watched. Part of the gauze packing was removed on the third day and fresh gauze applied. The subsequent history of the case was uneventful, except that, on the fourth day, she had a severe attack of vomiting and ejected a large round worm from the stomach; she sank into a state of collapse, and for some hours it was doubtful whether she would recover. At length she rallied, and from that time forward made slow but steady progress to recovery.

In order to destroy the life of the fœtus, it has been suggested by some authorities to aspirate the sac.

This case gives an instance when such procedure, though not done with the object in view, failed to arrest gestation.

EMPYEMA OF THE ANTRUM.—Dr. William Carr, of New York County read a paper in which he spoke of the danger of using metal drainage-tubes and of the superior advantages of an opening through an alveolus. Personally, he did not think the nasal operation ever justifiable. If necessary, a sound tooth should be sacrificed and an opening made through the alveolus, preferably of the second molar tooth, but it was very rare that a tooth would not be found necrotic, so that no sound tooth would have to be sacrificed. After the opening had been made the cavity should be explored with a flexible probe for seæpta and foreign bodies, and after irrigation, closed with a plug of sterilized gauze. He did not believe that drainage was an important factor in the treatment. Drainage-tubes served as a means of infection and irritation, and by their retaining ligatures were apt to cause destruction of the adjacent teeth. Silver tubes would corrode very rapidly and might even slip into the antrum.—*New York Medical Journal.*

SURGERY.

IN CHARGE OF

GEO. A. BINGHAM, M.B.,

Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children. 68 Isabella Street.

ABDOMINAL DRAINAGE.

MORDECAI PRICE, M.D., PHILADELPHIA, PA.

There has been no period in the history of abdominal surgery when Pennsylvania has not claimed, and with good grounds for the claim, to have masters in the work. The Atlees, in their day, were unquestionably leaders and pioneers in this work, and could they have had the drainage tube, they would surely have taken the glory from the latter half of the nineteenth century.

My first lessons in abdominal surgery were received from the hands of Washington L. Atlee. I have seen him operate in a number of uncomplicated cases and always with success, and I have time and again heard him, when asked what was found in case of death, answer, "blood and serum." Could he have had the help of the glass drainage tube, we cannot estimate what advances he might have made. The difference, in fact, between the surgery of MacDowell, Sir Spencer Wells and the Atlees, and the surgery of to-day is only possible by use of the drainage tube.

Philadelphia has always prided itself on the perfection of its surgery of every description, but especially abdominal surgery. It has always prided itself on the perfection of drainage; that its surgeons knew how to drain, and almost without exception its surgeons use the glass drainage tube. I thought that the question of drainage had been settled, not only in Philadelphia, but that abdominal surgeons throughout the world had been convinced of the usefulness and indispensability of the glass drainage tube. On account of this, I give the reasons that in my own work, influence the matter of drainage.

It has been stated recently that the glass drainage tube is fast passing out of use. This can be true only with surgeons with whom I have no acquaintance. Wherever drainage is necessary with us, glass is preferred if it can be used. In all pelvic and complicated abdominal operations, it is used almost without exception where drainage is indicated. Where there are no complications, no bleeding, no pus, no peritonitis, drainage can serve no good purpose. A justly celebrated surgeon says that drainage of the abdominal cavity is an expression of the present imperfect state of surgery. I would state that, in my opinion, the glass drainage tube is a very emphatic expression of the perfection to which surgery of

the abdomen has been brought. Without such drainage this surgeon might as well expect us to perform the perfection of surgery in the desperate cases that come into our hands, as to expect a carpenter to make a perfect piece of furniture from rotten wood.

Perfect surgery is that surgery which saves life. To deal with complicated cases, without a single anatomical feature of the abdominal contents recognizable, with bowel adherent, thickened, indurated and necrotic, attached to a tumor undergoing pathological changes from twisted pedicle or other complication, conditions which are rapidly killing the patient, we must remove such growth. To operate and save life is a triumph of surgery; ninety out of a hundred cases such as these would die without drainage; as it is ninety-five out of a hundred recover with it.

The indication for drainage is the possibility of poisonous material being left in the peritoneal cavity. Any fluid, pus, blood, serum or debris from any pathological condition will become poisonous if left in the peritoneal cavity. We know the power of the peritoneum to digest and take care of almost anything left in the peritoneal cavity when it is in good working condition, but the surgeon dealing with conditions that often accompany pathological growths and changes in the peritoneal cavity, does not find the peritoneum in a condition to be trusted with this important work. He therefore uses drainage, glass drainage, to guarantee the safety of his patient.

Glass drainage can only be accomplished with certainty when the surgeon comprehends just what he proposes to do with the drain. A glass drainage tube should be of small calibre of such length as to reach the most dependent point to be drained. It should have openings, the very smallest possible, to admit the fluid into the drain. Its end should be open. No portion of bowel should be under it. If there are two points in the pelvis or in the region to be drained, which cannot be emptied and drained by one tube, two or more tubes should be used. I have seen this necessary only in two or three cases among several thousand operations requiring glass drainage. I say this of my own work, and that of Dr. Joseph Price, whom I have had the pleasure of assisting and of watching his cases for many years. The drain should be cleaned by a long-nozzled rubber syringe, and the tube kept perfectly clean. Immediately after operation, the tube should be cleaned every twenty minutes or half-hour. As the discharge diminishes, the time should be lengthened from one to two hours. When the discharge becomes but slightly blood-colored serum, and from one to two teaspoonfuls only removed during the half-day, the tube should be removed. The tube also should be raised about a quarter inch every six hours during its stay in the abdomen, and a half rotation of the tube should be made at the same time. If glass drainage remains over thirty-six hours, it should always be followed by a small rubber drainage tube, with several holes near the end of the rubber, and, after perfect cleaning of the glass tube, the rubber passed through the glass tube to its very bottom, and the glass removed over it. This rubber tube should be removed twice daily, thoroughly scalded and passed back to within an inch of where it was before. Very few dressings will remove the rubber, the drainage track will have closed from the bottom, and

there will be no further trouble. This procedure is necessary after the use of glass drainage to make sure that no pocket is left at the bottom of the drainage tract. When drainage is used only from twelve to thirty-six hours, this precaution is unnecessary. No dressing of the mouth of the drainage tract, save to keep it clean.

I have seen gauze used but two or three times at the same time that glass drainage was used. I do not believe that it is an additional safeguard. On the contrary, I believe that it complicated the drainage.

It has been stated by a quite prominent operator that a glass drainage tube did not drain; that in a very few hours the drainage tube was encapsuled in lymph, and that the peritoneal cavity was shut off. To the contrary, in my experience, it has been clearly proved that it does drain perfectly, and every part of the peritoneal cavity, provided the operation has been properly performed, and the drainage tube placed in the most dependent position. If this were not so, why would we have free drainage of blood and serum in complicated cases where the enucleation extended throughout the entire pelvis, with separation of the head of the colon, the appendix and a number of feet of small intestines. From all these conditions, the oozing of blood and serum found its way into the hollow of the sacrum and was removed by the glass drainage tube. There is a reason for failure in all badly performed operations. An operator will begin his enucleation and separation of bowel, and leave great pockets, with an impenetrable wall of adherent viscera between the pocket of his enucleation and the pelvis where his drain is placed. To remove a tumor or pathological condition and not separate adherent bowel and omentum, is to leave a condition of affairs to prevent the serum and blood from finding its way to the drainage tube. Where all adhesions are separated, where the way is left clear for the serum and blood by gravity to find its way to the pelvis, there has never been a case in my experience where every drop of blood and serum and pus was not removed, and the condition of the patient showed clearly from the very start that there was nothing left for the peritoneum to do. I have never seen a failure that I could attribute to the failure of the drainage.

Just at the close of glass drainage it is important in some cases to freely move the bowel, so that as the intra-peritoneal drainage is removed the absorbents will take up the work and continue it. We have for many years ceased to purge our patients immediately after operations with the idea of preventing peritonitis, but often after complicated cases with delayed removal of the drainage tube, purgation is of great assistance.

Those who condemn glass drainage either have not used it correctly, or sufficiently long to appreciate its great advantages. In listening to discussions on this subject, we cannot help but notice the great discrepancies in statements on this subject. One man will remove the glass drain in twelve hours as a routine method. Another, who lays great stress on drainage, states that he cleans the tube personally every twelve hours. He also states that he places the bandages and dressings over end of the tube. Another, that there is danger of infection of the abdominal wound when exposed in order to dress the tube. Another, that it produces all

sorts of complications, fecal fistula, ulceration of the bowel; and, at the same time, he admits that the case was so desperate that he thought it best not to separate the adherent bowel, but removed only that portion of the diseased tube and ovary that seemed to be killing the patient. He therefore places the glass drainage tube in a case in which he has not completed the operation, and has left conditions so that no drainage, no matter how well placed, could save his patient.

The advocates of the gauze drainage make this statement: When the pelvis has been denuded of its peritoneum, and there are many abrasions of bowel and surrounding viscera, a glass drain will not answer; that the denuded portions of the pelvis must be packed with gauze in order that the bowels and surrounding viscera will not come into contact with the raw surfaces. They accomplish this from either above or from the vaginal route. I would simply ask, after the removal of the gauze, what is to prevent the irritated bowel coming into contact with the still denuded portion of the pelvis, for certainly no peritoneum has had time to form during the interval of drainage. If there is any place in abdominal surgery where glass drainage is demanded, where it does its best work, where it saves 95 per cent. of desperate cases, if the operation is properly done, it is in just such cases as the one spoken of above. I have seen it used in just such cases, with adherent and wounded bowel, in a number of cases where the bowel has been resected in the operation and the pelvis denuded of every portion of the peritoneum; ureters laid bare and the posterior face of the uterus denuded to its muscular coat. I have seen these cases recover without a single bad symptom, with no increase of temperature or pulse, with seemingly no systemic involvement of any kind, if the drainage was free from the start.

Some men set a fixed time for the removal of a drainage tube. This is out of the question. Some bad and complicated cases may require drainage only twenty-four hours; others may require drainage from three to four days. There can be no fixed limit. The requirements of each case is our only guide.

A strong advocate of gauze drainage thus expresses himself: "I have employed the abdominal gauze drain in about fifty cases. In a number of these cases it has proved inefficient, so far as the removal of the fluid was concerned. In some cases its early removal has been necessitated by an accumulation of blood serum. Its removal ordinarily causes severe pain to the patient. In a few cases sinuses have persisted for a considerable time, and in two or three cases ventral hernia has to my knowledge resulted."

A series of disasters of more serious magnitude cannot possibly follow any other mode of drainage save that of gauze. Accumulations of filth, blood, and 6 per cent. of hernia, is certainly not a showing to recommend it to anyone, much less to make an enthusiast of a man. I have never seen any such complication follow the use of the glass drainage tube.

Another observer makes the suggestion to use a large glass drainage tube, and that a rope of gauze be passed through the drainage tube so as to facilitate drainage; to place a stitch through the abdominal wall, so

that when the glass and gauze drainage is removed the drainage track can be closed by tying the stitch.

There could scarcely be suggested a more absurd and impracticable procedure or one that would be productive of more mischief. Free drainage often follows the removal of the drainage tube, and such discharge is welcomed by the operator as an evidence of successful drainage. The charge that glass drainage complicates recovery, produces fecal fistula and many other lesser evils, is only proof that the operator is either a bungler, or does not appreciate the fact that he has a wounded or necrotic bowel; and, instead of the drainage tube complicating his case, it is the salvation of his patient by giving a place of escape for feces and gas.

In the hands of experienced operators all these cases recover promptly. I have had them where, at the end of the operation, I expected fecal fistula, and placed glass drainage to guard against it, and thus guarantee the safety of the patient. The injury to bowel was so low, the necrosis so extensive, that immediate repair was out of the question. Some of these cases escaped fecal fistula, but all recovered by the use of the drainage tube.—*International Journal of Surgery.*

SURGICAL MORALS.

In an article on this subject published in the *Boston Medical and Surgical Journal* for March 19th, Dr. David W. Cheever says that in the present feverish condition of operative surgery, it may be prudent to ask ourselves what is the object of an operation and how we should regulate our conduct in unforeseen contingencies. The problem, he says, may be condensed into the following questions: 1. When to operate. 2. When not to operate. 3. When to stop. 4. When not to stop.

In regard to the first question, says the author, if we confine our selection of cases to those which clearly come under the cardinal rule for operation—namely, to relieve suffering, to prolong life, or both—there will be very little difficulty in the choice. We must consider whether life is imperilled and whether the suffering can probably be relieved. If we are asked to operate, he says, shall we accept only good risks, and decline the doubtful or hopeless cases?.

The second question is a difficult one to decide. Operations should not be undertaken without the full consent of the patient and his family, if it is possible to obtain it, and there should be some responsible person who understands the nature of the operation to be done and what may be reasonably expected from it. No operation should be done when the patient is in a state of shock, unless hæmorrhage, apnœa, or obstruction of the bowels is present, as in hernia, for example. If there is time, says Dr. Cheever, the systemic condition of the patient should be fully considered—for example, as to the integrity of the heart, the arteries and the kidneys. In a case of no emergency, the age and the prospect of life of the patient should be taken into account. In cases of glandular infiltrations which are so extensive as to preclude perfect removal, he says, an

operation should not be done; for instance, in a tuberculous organ, or in a sarcoma of the antrum where the sphenoid cells cannot be extirpated. There are two important exceptions to this rule, however: 1. To relieve agonizing pain, an operation should be done on any slight chance, for, unless the suffering can be palliated, the patient had better die than live. 2. In a forlorn hope, so to speak, after the risk has been fairly stated, the patient is entitled to an operation, if he wishes it, and if he takes the responsibility; here, however, the limit must be those cases in which there are one or more chances of success.

In regard to the third question, says Dr. Cheever, must we stop when the patient fails? Not always, for the failure may be due to the anæsthetic or even to simple nausea. In this case the surgeon should stimulate the patient and consider carefully before giving up the operation. Stopping, he says, is indicated when we come to the end of all that can be taken out—for instance, in a case of malignant tumor; in an operation in the abdominal cavity, when a glance or a touch reveals that the tumor is not removable and that it has grown into vital parts; in an operation on the surface of the body, when stopping will not imperil life so much as going on; in syncope with a pulse at 108; with sighing respiration, and with a colliquative sweat.

Concerning the fourth question, says the author, "When not to stop," keep on as long as the patient breathes; it is his only chance. The contingencies are: An operation which has so far displaced and broken up a soft internal tumor as to render death from bleeding or from sepsis certain if any is left; an oozing hæmorrhage; a difficult tracheotomy; a crushed skull with a pulse of 40 and Cheyne-Stokes respiration. Having trephined, he says, we cannot stop until compression is removed and the bleeding checked. Extravasation of urine, and a bladder to be drained; if the patient dies in the process, we must drain the bladder. If we do not do all these things the patient dies; his only chance lies in their being done.

Surrounded with these terrible chances, says Dr. Cheever, the surgeon, like the executioner, raises or depresses his thumb, and the patient lives or dies. Surely, he says, there is no responsibility like this. All this should teach us, first, to be over-careful about getting in so deep that we cannot withdraw, or about meddling with what had better be left alone. Second, not to imperil life to cover our mistakes, for we all make them. Third, in self-defense, to withdraw from an operation, or from a case, at once, if our advice is not followed. To bear the responsibility, we must be absolute masters.—*Med. Jour.*

CONSERVATIVE SURGERY IN THE TREATMENT OF HEMORRHOIDS.—By Dr. Joseph B. Bacon, of Chicago. He found in looking over his records that but a very small per cent. of his operative cases had been purely internal or external hemorrhoids. Patients who were suffering or bleeding sufficiently to cause them to seek medical advice were those who had a mixed form of piles, in which the anastomosing vessels connecting the external and internal hemorrhoidal veins had become varicosed, and these dilated veins pressed upon the sensory nerve filaments over the inner

border of the external sphincter muscle, causing pain and prolapse of the internal hemorrhoids. A segment of the varicose system of veins must be removed, one segment on each side of the anus being sufficient. Remove those hemorrhoids that are causing the discomfort together with the external or skin tags, and the patient is cured, and only a small surface of either skin or mucous membrane had been disturbed. The ligature, clamp, and cautery, or crushing method, according to the choice of the surgeon, would answer the purpose.

Treatment of Inoperable Malignant Tumors.—Dr. W. B. Coley, New York, in a paper read before the recent meeting of the American Surgical Association, in Washington, D.C., reported twenty-five cases of sarcoma treated by inoculating the patient with the toxines of erysipelas and bacillus prodigiosus, with six cures. Nine markedly improved and eight slightly improved. Also eight cancer cases, all but one of which showed improvement. The author's conclusions were as follows:

First.—The curative action of erysipelas upon malignant tumors is an established fact.

Second.—This action is much more powerful on sarcoma than carcinoma.

Third.—This action is chiefly due to the soluble toxines of the erysipelas streptococcus, which toxines may be isolated and used with safety and accuracy.

Fourth.—This action is greatly increased by the addition of the toxines of bacillus prodigiosus.

Fifth.—The toxines, to be of value, must come from very virulent cultures and must be freshly prepared.

Sixth.—The result obtained from the use of these toxines, without danger, are so nearly, if not quite, equal to those obtained from an attack of erysipelas, that inoculation should rarely be resorted to.—*International Journal of Surgery.*

Appendicitis.—Dr. W. Meyer (*Med. Rec.*, Feb. 29), sums up the indications for operative intervention as follows:

1. In cases of diffuse preforative appendicitis, the operation must always be done at once. Patients have the best chance to recover if operated upon within the first twelve hours. Exceptionally, patients get well without an operation.

2. In cases of acute appendicitis the patients always need careful observation. If the pulse goes up above 116 to 120, and has the tendency to stay there, the indication for an operation is given.

In case of doubt, the operation is better than waiting.

3. In cases of sub-acute (mild) attack of appendicitis, also after the first severe attack from which the patient recovers without immediate operation, the appendix should be removed. The appendix, once inflamed, has to be looked upon as a diseased organ, which is very apt to give repeated and more serious, even fatal trouble in the future.

When done at this time, we can almost always perform the blunt division of the abdominal muscles, according to the direction of their fibres, and thus save the patient the probable appearance of a ventral hernia.

POTT'S DISEASE.—"Pott's Disease," says Dr. R. W. Lovett, "is a very grave affection, and in advocating its treatment by recumbency, rather than by ambulatory measures, during the acute stage, I am speaking of what I believe to be the very best treatment. Other modes of treatment are, no doubt, excellent, but when one wishes to secure the very best result, it seems to me that, having recognized that apparatus is intrinsically imperfect, and necessarily so, to accomplish the purpose for which it is intended, it is incumbent upon the surgeon either to insist upon this treatment by recumbency, or to transfer the responsibility of ambulatory treatment to the parents. The use of apparatus, it seems to me, should be, during the acute stage, to vary the monotony of recumbency. That recumbency should be carried out by having the child lie upon its back upon a frame. The addition of traction to the legs and head I believe to be of benefit, and that it hastens recovery by quieting muscular spasm and improving the position of the spine. I believe that it should be used in all cases of paralysis due to Pott's disease."—*Med. News.*

CANCER A LOCAL DISEASE.—The evidence for this doctrine has been strongly presented by Dr. Jennings, in his work on "Cancer and its Complications," the second edition of which has been recently published in London. If cancer be a local disease, it is imperative that not only those tissues which are seen to be subjected to cancerous infiltration, but some of the surrounding tissues and the neighbouring lymphatic glands should be taken away by means of the knife at as early a date as possible. The amount of personal observation given in support of this method of treatment is not very great, but the careful analysis of the work and opinions of others and the comparison of the methods of termination of the disease under difierent methods of treatment amply warrant Dr, Jennings in drawing very wide and general conclusions.—*Brit. Med. Jour.*

CYSTITIS.—

℞ Guaiacol	5
Iodoform	1
Sterilized olive oil	100

S. Inject one or two grams into the bladder once or twice daily in painful cystitis and tuberculosis.

—COLIN.

STERNUTATION.—Prolonged sneezing may be checked by injecting spirit of camphor well back into the nostril.—STEWART.

Prof. Edwin Klebs has been elected to the chair of Pathology in Rush Medical College.

This college has recently been recognized by the Examining Board of the Royal College of Physicians and the Royal College of Surgeons of London, England. This recognition entitles its alumni to all the privileges accorded to the graduates of other institutions recognized by that board.

MEDICINE.

IN CHARGE OF

N. A. POWELL, M.D.,

Professor of Medical Jurisprudence, Trinity Medical College;
Surgeon Out-door Department Toronto General Hospital; Professor of Principles and Practice of Surgery, Ontario Medical College for Women. 167 College St.

THE MECHANISM AND DIAGNOSIS OF TRAUMATIC CEREBRAL LESIONS.

BY JOHN W. PERKINS, M.D.

Surgeon of the Union Pacific R. R., Kansas City, Mo.

In this paper I wish to review the mechanism by which traumatic lesions in the brain are produced, and the means by which an exact diagnosis of the seat of the lesions must be made.

Until recently it has been considered justifiable for the surgeon, after having made a gross diagnosis of fracture of the base, "compression" or "concussion," to stand by and see his patient die, or become the subject of epilepsy, insanity or permanent paralysis. Medical literature is filled with cases illustrating the natural results of these injuries, following the "expectant" treatment. From them, one quickly learns how slowly and imperfectly nature repairs the lesions, and how far reaching are the after effects. Some have questioned whether a cerebral injury is ever completely recovered from. The evidence is now complete, that various forms of insanity, in many cases, originate in and are directly caused by a neglected injury to the brain. This has long been known of epilepsy and various motor and sensory disturbances. In a recent paper read before our Jackson County Medical Society, I reported in detail ten cases of cerebral injury, showing forms of mental derangement, from simple loss of memory, to persistent irritability of temper, melancholia, delusional and moral insanity and mania, all the direct result of intracranial injury. Most of these were due to old injuries; some submitted to operation and were relieved, others not. But the recital of the cases was not so much for the purpose of calling attention to the results of late treatment, as to the fact that symptoms of such nature had resulted from an unrepaired intracranial injury. To show how infrequent interference is in these cases, I need only quote the statistics recently furnished by one of the best hospitals in the country. In six years, 308 cases of severe head injury were treated with 115 deaths. In twenty cases fragments of bone were removed and in 24 cases only was trephining done. Eighty-two of the cases were characterized as "Fracture of the Base," of which 60 died. Three of the 82 were trephined, two without success and the third was successful in opening into the seat of the hemorrhage, but the vessel wa

not secured and death followed in twenty-one hours. No report is made as to the condition of those who survived. Thirty-two cases, excluding the gunshot cases, came to autopsy and showed extradural hemorrhages in thirteen, which the report comments on as "a larger proportion, of localized extradural hemorrhages than is generally appreciated."

I cannot dwell on the necessity of repairing at once and as completely as possible, the effect of an injury to the brain or its coverings. All will, I think, acknowledge the desirability but question the ability to locate most of the lesions when recent, and even if located, to relieve them. Apparently little effort has ever been made to get at the basal extradural hemorrhages which comprise such a large proportion of the fatal cases. These extravasations remain fluid for hours after an injury, and the suggestion is directly at hand, that the pressure could be taken off a well localized mass by a carefully directed aspirating trocar or needle introduced directly through the brain mass, as well as by an opening at edge of base and separating the dura. It is not my purpose however to enter into treatment.

It must be acknowledged that the exact diagnosis of recent intracranial lesions often presents a most complex problem. The real difficulty does not lie in the interpretation of symptoms, for these are often complete and conclusive in their indications, but rather in the lack of data furnished by an unconscious patient. There are facts however which may be obtained under the most disadvantageous circumstances, and these are sufficient in the majority of cases to lead to a correct diagnosis. It is always to be kept in mind that the absence of symptoms is as significant and possesses as much logical force as their presence. Also that the brain is not unlimited, hence a localization by exclusion in the absence of a direct diagnosis, is permissible.

Let us take first the mechanism by which the lesions are produced, and then the resulting symptoms with special reference to their localizing value. The first effect of a blow is received by the scalp, which may be cut, bruised, lacerated, or when protected, may show no evidence whatever of a serious lesion beneath. It is always to be carefully examined for such evidences as it may furnish. It is the most direct avenue for infection, leading to important and often disastrous secondary changes, and on that account is worthy the most painstaking care of the surgeon.

The effect on the cranium is determined by the force of the blow, and the curve, thickness and density of the bone. The character of the injury can often be inferred from the nature of the accident. In a general way it may be said that it is dependent on the velocity and concentration of the force. When the velocity is great, and the force is concentrated, the effect is most marked at the seat of impact, as when a bullet strikes the skull. But when the force is disseminated and of slow velocity the effect is generally most marked elsewhere, as when a man receives a blow from a sand bag.

With the exception of the fracture at point of impact, which may be depressed, cranial fractures are linear and almost invariably run towards the base, following the curve of the shortest radius and in the line of

least resistance. That this is not invariably true is due to the fact that in some instances the force is so applied as to force the fracture to follow a long curve, as in compression of the skull from the sides. The so-called fractures by *contre coup* are no longer to be considered possible. The only way in which the skull can be injured on the opposite side, is by injury against a resistance which is really equal to a second direct blow. This applies to the brain also, which is often injured by being bruised through its impact against the skull.

Most of the linear fractures have no importance in themselves, and it is unfortunate that modern surgery still classifies head injuries under "fracture of the vault," "fracture of the base," etc., as though these were important. The close association of such structures as the facial nerves, the middle meningeal artery and branches and the sinuses makes it necessary to estimate as closely as possible their direction and extent. It should also be borne in mind that extensive fractures can not be received without grave injury resulting to the cranial contents as a result of the same force which produced them. But a depressed bone in itself does no harm, were it not for the injury it inflicts on the parts beneath. It is the brain and its nerves which are of importance, and which must be considered from first to last. This has been formulated in the statement that "all cases of head injury should be estimated primarily with reference to the amount of damage which the cranial contents have received, and secondarily with reference to their becoming involved."

The brain is a soft solid, permeated with tougher blood vessels, and poised on a water bed over a very rough and irregular base. This water bed of cerebrospinal fluid surrounds the hemispheres and is continuous with that in the spinal cord. At the base of the brain, it varies much in depth, owing to the irregularities forming the so-called lakes. Inside the brain the ventricles are filled with the same fluid, and each blood vessel in the brain is suspended in a double lymph space also filled with the same fluid. Between the muscularis and adventitia of all isolated arteries is the adventital lymph space of Robin, and outside of this, between it and the limiting membranes is the perivascular space—or space of His. Any increase in the size of the vessels take place at the expense of the fluid in one or both of these spaces—and as the skull is a closed box, it is conversely true that anything which displaces this perivascular fluid, must be attended by an increase in the size of the vessels, or rupture. Moreover not only the nerves but the nerve cells themselves, lie in spaces filled with the same fluid which connect with the perivasculur spaces.

The fluid on the ouside of the brain is directly continuous with that in the spinal cord, but that of the subarachnoid and intra-ventricular spaces is only communicable through the small foramen of Magendie at the fourth ventricle, the so-called cerebro-spinal opening. It is this cerebrospinal fluid which plays the most important rôle in traumatic intracranial lesions.

The other factor is the elasticity of the skull as a whole. This varies greatly from infancy to old age, but must be most marked in the young adult skull with firmly united sutures and a large amount of animal mat-

ter in the bones. If dropped from a height on the floor such a skull will rebound like a ball. The interosseous membranes prevent the infant's skull from having the solidity necessary for such a rebound, and the brittle bones of old age break too easily, so that the problem varies somewhat at the extremes of life. It has been shown by Felizet that the adult skull, when struck a moderate blow, yields under it, forming what he calls the "cone of depression." It is similar to what occurs in a billiard ball or a bell when struck. The blow compresses the billiard ball in one diameter and it lengthens in the transverse. As it rebounds the long diameter becomes the short one and the short one lengthens, and this continues, the alterations becoming continually more feeble until the force is spent. This causes in a bell what we call its tone, which is long drawn out because its edge is accurately round and hangs free so that nothing interferes with the vibrations. But in the skull the effect is necessarily of short duration, the vibrations being quickly interrupted by its buttresses, irregularities and attachments.

Under these premises, what happens from a blow on the head? Let us say for simplicity, that it is not sufficient to produce a penetrating wound. Under the blow the skull is momentarily depressed—lengthens in the transverse diameter, and rebounds, becoming elongated in the diameter in which the blow is received. The bone may or may not be fractured. If depressed beyond a certain point it can not rebound and we have a depressed fracture. The fissure in the bone may involve vessels or nerves in close connection with it, leading to immediate hemorrhage or paralysis. The sudden depression of the skull drives the cerebro-spinal fluid forcibly from under it, and superficially it must spread laterally into the areas where the diameters are elongated—and what is not thus accommodated is forced into the perivascular lymph spaces, or forcibly injected into the spinal column. This explains how we can have a lesion of the spinal cord from a blow on the head. The quick rebounding of the skull tends to leave a vacuum at the four diameters where the maximum of motion has been, *i. e.*, at the point of the blow, diagonally opposite and at the two points at the extreme of the transverse diameters. Now the impetus given to the cerebro-spinal fluid is such as to send it out of the way, and the influx of the fluid is relatively slow, so that we have the vessels left without support, and they give way under the strain at the four points mentioned. Thus are accounted for the extradural and sub-dural hemorrhages.

That which happens in the brain is exactly analogous to that which happens in the cerebro-spinal fluid lying outside. The impetus of the blow received on the vault tends to drive the fluid from the larger ventricles into the smaller, from which there is no escape except through the small opening of Magendie.

All the perivascular lymph spaces receive the same impetus, and momentarily the blood vessels and nerves are unsupported; thus occur numerous minute intercerebral hemorrhages into the nerve sheaths, which are found as constant factors in cerebral injuries. The sudden intense distension of the fourth ventricle often results in rupture of its walls. In this way are accounted for the well-known glycosuria which so often

follows cranial injuries; also cases of immediate death from laceration of the vagi at their roots. The rush of the fluid through the foramen of Magendie into the spinal cord is sufficient to irritate and often to lacerate the restiform bodies in the bulb. It has been experimentally found that mechanical irritation of these bodies, produces a reflex anemia of the brain, attended with all the symptoms of the so-called "concussion."

Also the evidence of many autopsies points to them as the seat of the fatal lesion, so that the conclusion is irresistible that the opisthotonus, spasms, rigidity and other symptoms joined together under the name of concussion, find their explanation in the irritation of the restifirm bodies, by the cerebro-spinal fluid as it is violently injected into the spine.

The brain mass itself, deprived of the protection of the cerebro-spinal fluid, is lacerated at the site of the blow, and on the opposite side through its own impetus against the bone. When the impulse is downward, it is found that the resulting injury against the jagged projections in the base are not more marked than against the smooth and rounded vault. These act like the elastic falx and tentorium which are stretched like sails in different planes between the cerebral masses, and take up a large portion of the force, directly preventing the impinging of the proximal half of the brain upon the distal portion and against the opposite bony wall. It is interesting to note that the tentorium is ossified in some animals, whose brains are built on the fore and aft plan, *e. g.*, cats.

All possible primary lesions thus consist of, 1, the fractures in the skull and rupture of nerves or arteries and sinuses in close connection with it, with their resulting hemorrhage; 2, lacerations of the cerebrum, basal ganglia and the underlying nerves; 3, hemorrhages into the brain substance, nerve sheaths and basal ganglia and edema of tissue adjacent to those parts pressed upon. Of these three sets of lesions, localized hemorrhages upon the surface are in the majority of cases the cause of death or permanent injury, and statistics show that a majority of them can be reached if located. The secondary lesions comprise unorganised blood clots, cysts, hematoidin deposits, collections of colloid bodies, cicatrices, miliary scleroses, adhesions, varicose veins, and last but not least, the secondary infections, pyogenic and sarcomatous.

I wish to-day to consider the symptoms from primary lesions only, *i. e.*, the fractures, lacerations and hemorrhages which we see in a recent case. I wish to repeat that the linear fractures are of little importance beyond indicating the possible source of other lesions.

The inference to be drawn from immediate facial paralysis, hemorrhage from the ear and a true sub-conjunctival hemorrhage are too obvious to be repeated. The depressed fractures interfere with or suppress the functions of the portion of the cortex pressed upon and demand immediate attention, not with a view of restoring the skull, but wholly with reference to the underlying brain. There is no such thing as a depressed fracture without symptoms, unless you suppose that there is a portion of a man's brain without function. It may take time and study to demonstrate them, however. The effect of the lacerations and hemorrhages depend upon their situation and extent. A laceration may cause immediate and total abolition of function at the site, through the severing of

the nerve connections of the part. The phenomena resulting from a hemorrhage, and the mechanism by which it acts, are best seen in cases where a small vessel is ruptured and a considerable time occupied in the development of symptoms. Slight at first, it irritates the abutting cells and the normal action of these cells is manifested peripherally in response to the stimulation. If into the motor area, involuntary twitchings or spasms of a muscle or group of muscles may result. As the hemorrhage increases in amount, it presses upon the cells, and driving out the intercerebral fluid prevents the circulation of blood and lymph through the part pressed upon. From the irregularities of pressure upon the vessels, a halo of edematous tissue invariably forms around the compressed area. This area is bloodless, therefore without function, and this loss is manifested peripherally. It is not to be seen by looking at the compressed area. The resulting symptoms comprise all possible motor and sensory disturbances, mental and moral aberrations according to the parts pressed upon. A good example of the varying effects of pressure from hemorrhage is seen in the eye symptoms resulting from rupture of the middle meningeal artery. At the outset the eyes twitch toward the side opposite the lesion, and remain there with contracted pupils and often constant nystagmus until the pressure is sufficient to cause a paralytic lesion when the eyes roll toward the side of the lesion, the pupil on the side of the lesion dilates and the paralysis is complete. The importance of a hemorrhage depends upon the nature of the tissues pressed upon the degree of pressure. A mass the size of a pea, suddenly extravasated into the medulla may be immediately fatal, while a pint of blood may be slowly and harmlessly spread over a hemisphere with few recognizable symptoms.

A depressed fracture acts like a localized hemorrhage in the cortex and is equivalent to the introduction of a foreign body into the cranial cavity. From it the general cerebro-spinal pressure rapidly rises and gradually falls, leaving the depressed area anemic in the midst of an area of edematous tissue which rapidly forms.

From the local pressure there results a general difference in the temperature of the sides of the body. When the compression is slight, the opposite half of the body (*i. e.* the paralyzed half) shows an axillary temperature distinctly higher than that of the other side. Whereas, when the compression is considerable, the reverse in the case, and the opposite side has a lower temperature than that on the same side of the lesion. It has been suggested as a working hypothesis to account for these facts, that a small pressure produces an irritative lesion of the inhibitory mechanism of the vaso-motor centre supplying the opposite side of the body, and so a dilatation of the cutaneous vessels it produces, causing a rise in the surface temperature. A greater pressure produces a paralysis of the inhibitory mechanism, so that the vaso-motor centre acts without restraint, constricts the vessels, and leads to a fall in temperature. This point has not yet been fully worked out, but may be of considerable importance when fully developed.

A local compression of the cortex also causes characteristic changes in the pupil. If the compression is small, an irritative lesion apparently

results and at the same time, as the temperature of the opposite side of the body becomes elevated, the pupil of the same side contracts and reacts poorly to light. When the compression is greater (the opposite temperature falls) the pupil of the same side dilates, while the opposite pupil contracts.

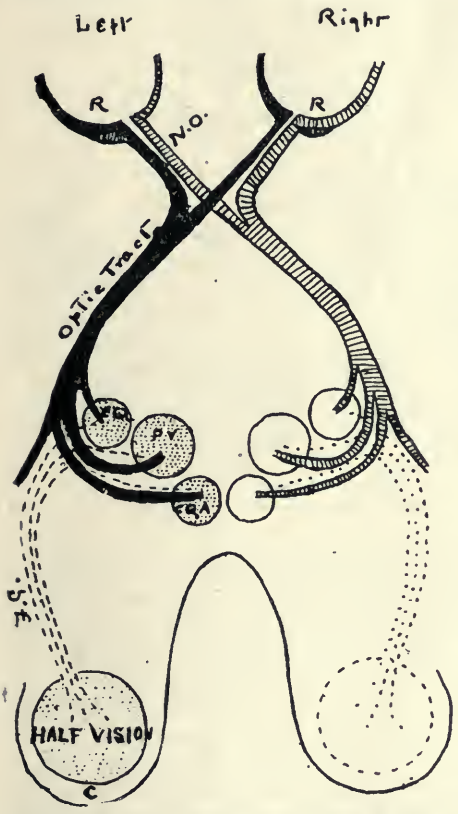


FIG. 1.—Showing course of visual fibres. R, retina; N O, optic nerve; P V, pulvinar; C G L, corpus geniculatum laterale; C Q A, corpus quadrigeminum anterius; F G, fibres of Gratiolet; C, cuneus.

When the pressure becomes great enough to considerably affect both hemispheres, the opposite pupil will also dilate. Dilation of the pupil primarily on the same side as the lesion was described thirty years ago by Mr. Hutchinson, and has since been known by his name, and the "Hutchinson pupil" has become familiar as a sign of hemorrhage from the middle meningeal artery. The phenomenon was supposed to be due, by Mr. Hutchinson, to the gravitation of the blood toward the base and its pressure upon the third nerve. But recent experiments have shown that pressure at that point is not necessary to produce the phenomenon. Furthermore it would be difficult to explain on this hypothesis, as Mr. Dean points out, how it is that only the fibres of the third which go to the iris are paralyzed, while the other muscular branches are not. It would appear that any cortical pressure, at least in this region, is sufficient to produce the dilated pupil.

Beside the alteration of the pupil referred to, which is really a paralysis of the muscular fibres of the iris, we may have as eye symptoms: 1, paralysis (and spasms) of the ocular muscles; 2, alteration in the field of vision; 3, incoördination of the parts concerned in the act of vision in each eye singly. In order to understand the ocular symptoms it is necessary to know a little of the central visual apparatus. The movements of the external muscles or the eye are controlled by the third, fourth and sixth nerves, and this motor mechanism "is finely bilateral but the sensory mechanism is badly unilateral," and hence of much greater localizing value. This unilateral disposition affects not each eye singly, but the lateral halves of both eyes. Taking first the muscular apparatus, and the third, fourth and sixth nerves: If we turn our eyes to the right or left it is done by the double synchronous action of the internal rectus of one

eye and the external of the other. This is the physiologic process known as conjugate deviation.

Definite relations do not appear to exist between any one part of the motor area and the ocular movements. Irritation of the whole cortex as well as the visual area occasion ocular movements toward the opposite side (conjugate deviation) and these movements are greater, the farther the irritation is removed from the macular region of the visual area. The fibres from their cortical nuclei are collected and rearranged and coördinated at the top of the pons Varolii and pass out thence together, coming into close relations again in the neighborhood of the cavernous sinus and the sphenoidal fissure. The only portion of the cortex which seems to have a definite ratio to any of the muscles about the eye is a portion of the anterior central convolutions in front of the face area (Fig. 2). Pressure at this point causes a falling of the upper lid (levator palpebræ superioris), on the opposite side from the lesion. The connection of the basal motor ganglia with the cortex of the cerebrum is as yet uncertain, but the fibres pass down in the anterior part of the internal capsule and through the pyramidal tract to the neighborhood of the third nerve where they cross. As the internal recti are supplied by the third and the external by the sixth pair, a limited lesion in the pons may result in separating conjugate movements into its elements.

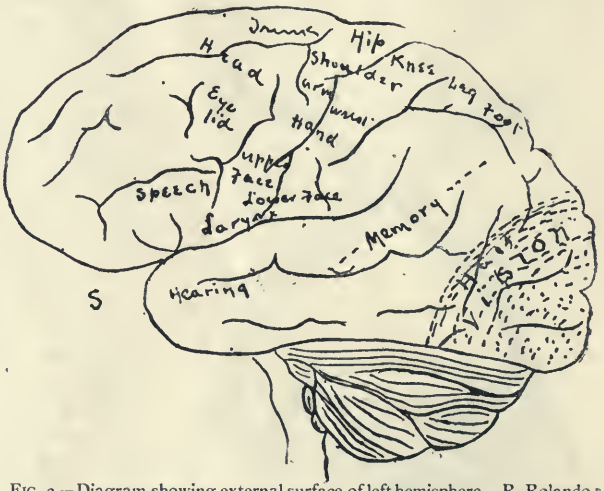


FIG. 2.—Diagram showing external surface of left hemisphere. R, Rolando; S, Sylvius.

A considerable lesion in the pons will produce a wide spread ocular palsy. And the farther away from the pons the lesion is, either cortically or peripherally, the more limited will the paralysis be. Lesions above the pons and in the cortex produce physiologic paralysis *i. e.* of associated movements of both eyes. Lesions below the pons will paralyze single nerves and their correspondingmuscles. Excepting that, a lesion at the cavernous sinus and sphenoidal fissure may take in a group of nerves but affecting one eye only. And this paralysis will be crossed with any body paralysis which may be present: To summarize: Conjugate deviation of the eyes, accompanied by twitching, spasms or other irritative symptoms, is indicative of a lesion in the cortex on the opposite side to the deviation. Conjugate deviation accompanied by paralytic symptoms, dilatation of the pupil, indicates a lesion on the side toward which they deviate. Ir-

regular or partial conjugate deviations and wide spread palsies indicate a lesion in the pons. Monocular palsy may mean a lesion anywhere between the eye and the basal nucleus, but if more than one nerve is implicated, the lesion may be near the sphenoidal fissure, or in the cavernous sinus. Ptosis results from paralysis of the third in its course or pressure on the anterior central convolution.

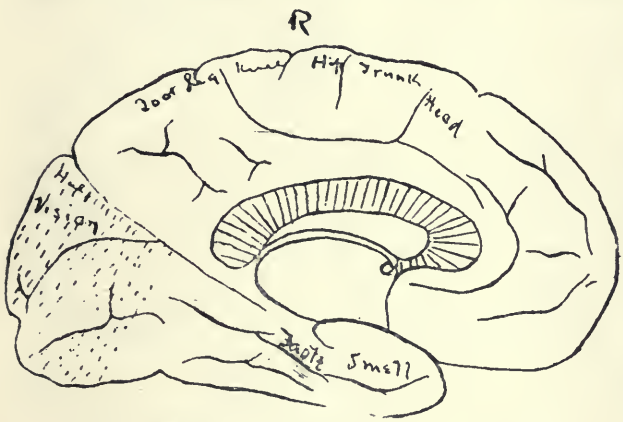


Fig. 3.—Diagram showing mesial surface of left hemisphere.

In the sensory act of vision, two orders of central apparatus are involved, whose relations are best understood from the diagram (Fig. 1). The optic nerve divides into three parts which go to the pulvinar, the anterior corpora quadrigemina and the lateral corpora geniculata. These are usually spoken of as the primary visual centres. These are in turn directly connected with the cortex of the occipital region of the cerebrum called the secondary or half vision centres (Fig. 1 c). As was said in speaking of the motor mechanism, the sensory mechanism is "badly unilateral," and is connected with, not each retina singly, but the corresponding halves of both retinæ. This I believe is made clear in the diagram.

The same distinction is to be found here as elsewhere between irritative and paralytic lesions. If the lesion in the visual cortex is slight, the irritation is manifested in subjective sensations of flashes of light, of colored fire, etc., and may be referred to the opposite eye, or may be common to both eyes. A lesion large enough to suppress the function of the cortex is manifested by a loss of vision in the lateral halves of both retinæ on the side of the lesion. This symptom is known as homonymous hemianopsia. It may be caused by a lesion anywhere between the chiasm and the cortical visual centre, but practically for our purpose it is necessary to consider only the cortex lesion, as any hemorrhage large enough to interrupt the conduction in the optic tract would be otherwise immediately fatal. Wilbrand's test is of use here in case of doubt. A fine pencil of light is directed on to the paralyzed side of the retina; if the pupil contracts, the lesion is cortical; if it does not, it is in the optic tract. Central vision in cases of hemianopsia is usually unimpaired, the macular centre being apparently double and common to both eyes.

In rare cases the lesion may be so placed as to involve a portion of the macular centre, thus causing incoördination of the visual images of one eye and giving rise to monocular diplopia. The inference from this symptom is immediate and direct as to the implication of the macular

centre. The sensory eye symptoms must be looked for. It should be remembered that a paralysis of the left side of both retinæ means that right half of the field of vision is involved.

Leaving the eye we come to the motor apparatus, of which the centres have been well differentiated. They are grouped around the fissure of Rolando and can be best shown quickly by a diagram (Figs. 2 and 3). The location of the leg, arm and face centre, eyelid, speech, hearing and smell are accurate, and any paralysis or spasm of cortical origin will appear on the opposite half of the body. The fibres from the cortex are collected, pass through the internal capsule into the crura cerebri, thence into the pons where the facial portion crosses to the opposite side (Fig. 4). The arm and leg fibres pass on into the medulla where they cross over. Somewhere between the cortex and the crus cerebri, probably in the internal capsule, the sensory fibres join the motor, but their centres are as yet poorly worked out. A lesion in this part of the cortex is often purely motor. Lower down the lesion must involve sensation.

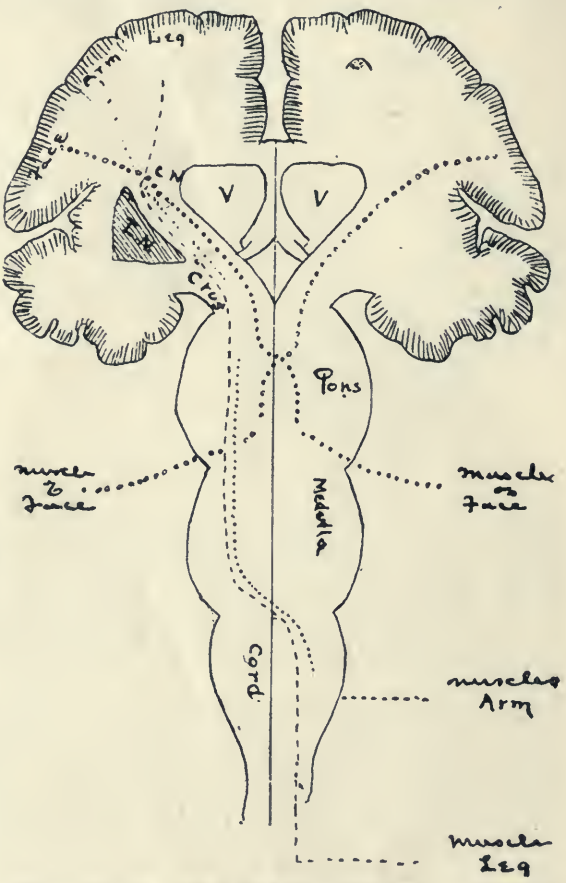


FIG. 4.—Showing course of fibres from motor tracts. V, lateral ventricles; L N, lenticular nucleus; C N, candate nucleus. Between them the internal capsule.

When the lesion is above the crus cerebi, we have the ordinary crossed paralysis of the face, arm and leg; but from the crus down we may have one or another of the alternate paralyses combined with a lesion of the cranial nerves in most instances. There may be 1, paralysis of the face arm and leg on the opposite side to the lesion and of the muscles supplied by the third nerve on the same side; 2, paralysis of arm and leg on the opposite and face on the same side; 3, paralysis of the arm and leg on the opposite and of the muscles supplied by the seventh and sixth on same

side; 4, paralysis of the arm and leg on the opposite side and the face on both sides; 5, paralysis of face, arm and leg on the opposite side, and anesthesia (from paralysis of the fifth) on the same side of the face; 5, paralysis of the arm and leg on the opposite, and the tongue on the same side. It is important to keep in mind the significance of the cross paralyses. What has been said of paralyses applies equally well to spasms.

So much for connected facts regarding the possible seat of lesions. There remain several disconnected facts, which are often of great significance. The first of these is the hyperpyrexia often attending a hemorrhage into the pons. The screaming fits which result from irritation of the posterior portion (testes) of the corpora quadrigemina and the incoördination of movements following pressure upon anterior portion of the quadrigemina are worthy of note. Pressure upon the middle lobe of the cerebellum also produces incoördination especially in the legs. Vomiting which is so common in head injuries has some localizing value. In the vast majority of cases it is a pure reflex caused by pressure or irritation of the membranes of the brain. It may be also caused by direct implication of the vomiting centre in the medulla from which the vomiting is usually active and persistent. In ordinary cases it is to be taken as indicative of a surface lesion, and its frequency may be roughly used in connection with other symptoms in estimating the degree of intracranial pressure.

Similarly manifestations of pain point to a surface lesion as was pointed out by Mr. Hilton many years ago. But all manifestations of pain are apt to be suppressed quickly by the rise in the intracranial pressure. It is a valuable localizing symptom however when present. The retraction of the head and neck, associated with incoördinated movements, mechanical yawning, low temperature, slow and feeble pulse and especially jerky uneven feeble respiration are characteristic of hemorrhages into the cerebellar fossa.

Unconsciousness commonly follows severe head injuries immediately. If it does not pass off in a short time it means an increased intracranial pressure, probably from hemorrhage. If it passes off promptly and after a short lucid interval the patient becomes again unconscious, the diagnosis of hemorrhage is certain. Associated with paralytic symptoms and dilated immobile pupils, it is indicative of excessive intracranial pressure, probably from hemorrhage, and demands immediate operation, if only to relieve an edematous dura in the absence of definite localizing symptoms.

In conclusion it may be said that the cerebral centers are not to be considered as sharply defined in their relation to the body but as spots of maximal relation whose functions merge into and are directly connected with those of other centres. The cerebral centres are not related to the body like the keys of a piano to its strings, but rather as the keys of an organ which by its stops may bring forth many combinations in harmony with the pipe which corresponds to a given key.

OBSTETRICS AND GYNAECOLOGY.

IN CHARGE OF

J. ALGERNON TEMPLE, M.D., C.M., M.R.C.S., ENG.,

Professor of Obstetrics and Gynæcology, Trinity Medical College;
Gynæcologist Toronto General Hospital; Physician to the Burnside Lying-in Hospital.
205 Simcoe Street.

HARMFUL EFFECTS OF THE BICYCLE UPON THE GIRL'S PELVIS.

In this paper reference is made only to parturition, and the word pelvis includes both the "static" and "dynamic" pelvis.

Walking is as necessary to the proper moulding of the semicartilaginous bones of the girl's pelvis, in reference to natural childbearing, as is the use of a muscle for its development and symmetry. A girl weighing one hundred pounds riding a bicycle on a level surface makes the counter-pressure of *only four pounds* against the pressure of the head and trunk, balanced upon a too narrow and rigid surface. As in our climate the bicycle is used nine months in the year, and as the modern girl walks less and less, while more abundant nutrition, both intellectual and animal, is supplied, increasing the size of the fetal skull, her prospects for instrumental delivery, symphyseotomy, and celiotomy increase. It is yet too early to verify this prediction, but for years the very large increase in the number of cases in which the forceps has been used by the masters in obstetrics demonstrates the evil effects of the lack of walking.

When Nature increases the size of the fetal head it increases the capacity of the mother's pelvis, but such increase may be frustrated by art. Through laziness man is said to have worn his tail off by much sitting, and through the fashion of not walking woman will add to the inconveniences, if not the impossibilities, of natural labor. For centuries the horse has been utilized, but both the teaching of anatomy and of propriety has prohibited the woman from bestriding his soft back. The fact is that the straddling attitude is unnatural in man, and only became popular through the chase and through war, and surgical injuries are sufficiently common on account of such attitude. The parts traversing the male perineum are sensitive and important and lie superficially. But they are slightly protected from pressure by broad and comparatively long ischial tuberosities which are *near together*. In addition the perineum of the male is moderately protected by hair. In the female perineum the tuberosities are smaller, sharper, and *wider apart*, and it is comparatively without hair. As shown by its tissue, physiology, and function, the perineum of woman is a kind of *supplemental uterus*. It is padded with connective tissue, prolonged pressure upon which must cause condensation and atrophy, thus adding "atrocious" pain to the second stage of labor and much liability to rupture.

"Until after the period of puberty the pelvic bones readily yield to mechanical influences" (Playfair); therefore there is much probability that the bicycle will at the yielding period tend to press the ischial tuberosities inward and upward, and the younger the girl the more the distortion. And if such is the case there is added a serious complication to the flattened pelvis, the most usual deformity in Europe and in America. Then, in addition to a narrowed lateral outlet, as the coccyx comes lower down and extends further forward in woman, it may be ankylosed through pressure and jars. However, as it is easily broken in labor, this is not so serious. Parvin, without reference to the bicycle, seems to think that the simple weight of the body may cause the flattened pelvis. If such is true, then the slightly forward inclination of the pelvis of a girl on a bicycle may further tend to the production of such anomaly. The pelvis is not in the axis of the body, and it is among the last portions of the body to be matured, at 20 years of age. Then it is only mature until a period of conception, when its synoviæ and ligaments grow, the perineum participating. This is the case up to 45 years of age on an average. The difference between the shape of the child's and the adult's pelvis is most largely due to pressure and counterpressure through living levers, the body and lower extremities. This is well proven in the exaggerated development of the side of the pelvis used by a youth with one leg. From the weight of the trunk "the upper portion of the sacrum, in rotating forward, drags upon the posterior ligamentous attachments of the ilia. This traction would, were it not for their union at the symphyses and the pressure of the heads of the thigh bones, cause the ossa innominata to revolve around the sacral articular surfaces like doors upon their hinges. As a result of the antagonistic action of the symphysis (pubis) and the sacro-iliac ligaments, however, the ossa innominata bend at the point of least resistance (in the growing bone) in front of the sacrum, and in this way an increase takes place in the transverse at the expense of the antero-posterior diameter" (Lusk).

In the lower animals, the weight of the body being distributed to four legs, the pelvis is much less complicated in shape, is more square-shaped.

To digress a little: In a practice extending over eighteen years I have never seen a case of placenta previa except in active, hard-working women. That the bicycle will predispose to placenta previa is a question which may be decided in the affirmative.—*The American Journal of Obstetrics.*

VENTRO-SUSPENSION OF THE UTERUS. PREGNANCY AND TRANSVERSE POSITION OF THE FŒTUS.

MILANDER (*Zeitschrift für Geburtshülfe und Gynäkologie,*) has collected a considerable number of cases in which pregnancy supervened after the operation of ventro-suspension of the uterus. He adds two cases, which are as follows: His first was that of a multipara upon whom suspension of the uterus had been performed to remedy prolapse of the anterior vaginal wall and retroflexion of the uterus. Milander

was called to the patient in labor, finding the fundus of the uterus two fingers' breadth below the umbilicus, while above the symphysis there was a thickened or scar tissue the width of a hand in the linea alba. The abdominal wall was depressed at this place. The child had been expelled, but the placenta was retained, although there was but slight hemorrhage. The placenta was readily removed by friction, and the patient made an uninterrupted recovery.

A second case was that of a multipara upon whom the operation of ventro-suspension had been made because of prolapse of the vagina and uterus. The patient had recovered well from the operation, and was admitted again to the clinic in the pregnant condition. The uterus was found two fingers' breadth above the umbilicus, the head upon the right side of the pelvis, the breech upon the left. The anterior abdominal wall was adherent to the anterior wall of the uterus at the site of the former suture. By palpating the round ligaments, it was possible for the physician to determine that it was not the fundus of the uterus which was found two fingers' breadth above the umbilicus but that it was the posterior wall of the uterus which was greatly distended, while the fundus itself was lying two fingers' breadth beneath the umbilicus. The heart-sounds were heard in the median line. The vulva was swollen, while the cervix was drawn strongly backward against the promontory of the sacrum, the external os admitting two fingers. The membranes had ruptured, and the scapula, arm, and a loop of the umbilical cord could be felt. As dilation was slow and pains were weak, De Ribe's bag was introduced, but was only partially successful. Under narcosis it was possible to dilate the os and to make version and extraction. The child was asphyxiated, but readily revived. There was a tear of the pelvic floor, which was easily united.—*American Journal of the Medical Sciences.*

TREATMENT OF UTERINE FIBROIDS.—The rapid changes in the manner of treatment of these growths have produced a condition of doubt in the minds of many as to what course they should follow. Penrose, in a review of the subject, says: Hysterectomy is advisable in the vast majority of cases of fibroid tumor of the uterus; in all cases in which there are urgent symptoms from pressure or in which there are urgent subjective symptoms referable to the uterus; in all fibrocystic, œdematous, and myomatous tumors; in all tumors of intraligamentous or subperitoneal growth; in all large tumors which have become decidedly abdominal; in all cases in which we cannot safely and surely remove all ovarian tissue and the whole of the Fallopian tube. The operation of castration should never be undertaken unless the operator is prepared to perform hysterectomy, should this be found necessary. The suitable cases for castration are hard fibroid tumors of small size, of such development that no pressure is produced, and when there are no marked subjective or reflex symptoms. In the case of an old woman who has passed the menopause, in whom the fibroid tumor has stopped growing, and in whom there is no discomfort from the size of the tumor or from pressure, operation is not indicated.—*Am. Jour. Obst.*

SUSPENSIO UTERI.—Howard Kelly reports two hundred cases with no deaths, no involved convalescence, and only one failure to retain the uterus in position. His method of operation is as follows: After due preparation, emptying the bladder, and anæsthesia, the abdomen is slightly elevated and an incision three to five centimetres long is made, beginning about two centimetres above the symphysis, down into the abdominal cavity. The peritoneum is then caught with artery forceps on each side and drawn out; this is to prevent pulling in the peritoneum by the suspensory sutures and leaving none to close the incision. The retoflexed uterus is then hooked up and lifted into anteflexion by means of two fingers carried into the wound. One side of the incision is then elevated with two fingers, and the peritoneum and subperitoneal fascia caught with a curved needle carrying the suspensory silk ligatures. The amount of tissue embraced is about one-third of an inch wide and one-eighth of an inch in depth. The same ligature is then conducted through the uterus on its posterior face below the fundus, and finally through the peritoneum and fascia of the opposite side, when it is tied, bringing the uterus up snugly against the anterior abdominal wall. After tying the first suspension suture the second is easily put in, entering and emerging on the abdominal wall just above the first and piercing the posterior surface of the uterus just below the first; when it is tied it increases the anteflexion. The sides and front of the uterus are examined to see that no intestine is caught, and the omentum is drawn down, and the abdomen is closed by taking off the forceps and sewing up first the peritoneum with the finest silk, and then drawing together the fascia with one or two silver-wire mattress sutures, finally closing the skin with a subcuticular suture of fine silk. The patient may rise sooner, but it is better to keep her quiet from two to three weeks. It is not necessary to wear an abdominal bandage or a pessary afterward.—*Am. Jour. Obst.*

ABDOMINAL HYSTERECTOMY WITH INTRA-PERITONEAL TREATMENT OF THE STUMP.—Mr. Harrison Cripps considers that the surgical removal of fibroid tumors of the uterus was called for in the following class of cases: (1) Excessive hæmorrhage, uncontrolled by the ordinary method of treatment, and in which oöphorectomy is impossible; (2) serious pressure effects on the bladder or rectum; and (3) when the pain or the size of the tumor renders the patient unable to earn her living. Mr. Cripps contrasted the extra-peritoneal with the intra-peritoneal method of treatment of the pedicle. The latter gave him the best results. Whilst in the extra-peritoneal method the danger from sepsis was slighter, that from obstruction of the intestine and ureters seemed greater than in the intra-peritoneal method. This greater risk of peritonitis in the intra-peritoneal method was from infection through the vagina. To minimise this risk Mr. Cripps laid stress on two points: (1) Thorough and repeated douching of the vagina with perchloride of mercury; and (2) care in accurately closing the peritoneum over the surface of the stump. Details of the method of operation employed were then given, stress being laid on two points: (*a*) The importance of having sufficient room supplied if necessary by making a long abdominal incision, and (*b*) the method of secur-

ing the vessels in the broad ligaments. This depends on whether the layers of this ligament have been separated by lateral burrowing of the tumor or not. Notes were then given of eight cases operated on by the intra-peritoneal method (up to September, 1895). Seven cases ended in recovery; there was one death from sepsis, due to infection from the vagina. —*Lancet.*

UTERINE MYOMA.—E. C. Dudley reports four cases of uterine myoma, with various complications, removed by abdominal incision, to illustrate the fact that no stereotyped operation for this trouble can be laid down. Each case must be operated upon according to the indications which it presents. Sometimes the entire uterus and its appendages must be sacrificed; often they may all be preserved, as should be done when the tubes and ovaries are healthy; sometimes the cervix uteri may alone be left. In certain cases the injury to the pelvic peritoneum is so great that drainage is necessary; in others the injury is so slight that when the ligatured stumps are drawn down into the vagina and the vaginal and abdominal wounds are closed there is no peritoneal traumatism save the united wounds. Vaginal drainage is preferable to that through the abdominal wound, as affording better drainage and complete closure of the abdominal wound and consequent rapid convalescence, with the minimum risk of ventral hernia. When no opening has been made into the vagina in the operation proper, such an opening should, as a rule, be made posterior to the cervix for the purpose of drainage.—*Am. Jour. Obst.*

DYSTOCIA FROM VENTROFIXATION.—A woman, æt. 23, entered Goubaroff's service during the second day of labor. In 1890 she had undergone a ventrofixation on account of uterine retroversion. Examination under chloroform showed retraction of the vagina, undilated os, and right dorso-anterior position of the fetus. An attempt to perform external cephalic version failed. It was then decided to wait for dilatation and deliver by podalic version. The pains came at intervals of about ten minutes and finally assumed a tetanic character; the os, however, remained closed. On account of the high position of the os manual dilatation was not successful. Laparatomy and dividing of the adhesions was contraindicated by the danger from hemorrhage, rupture of the pathologically changed uterus, and because the fetal heart sound had become irregular and demanded rapid delivery. Cesarean section was performed and a living child obtained. Mother recovered.

Milander has collected seventy-four cases of ventrofixation which subsequently became pregnant. Of these one woman had died before labor commenced; ten were still pregnant. In six cases abortion occurred, there were prematurely delivered, and fifty-four went to full term. In three cases the fetus presented transversely, in one the breast, and in another case the ear was the presenting part. The remaining forty-nine cases had normal positions. Except some pain at the site of the fixation, pregnancy presented no complications. Feeble labor pains were observed in two cases, and in eleven cases aid was required; this consisted in two

Cesarean sections, twice podalic version, one extraction by the foot, and four times the forceps was applied. The author points to the large proportion of abnormal positions and the seriousness of the operations required. The uterus in many cases, owing to its abnormal position, can only expand laterally, and this accounts for the great frequency of cross-births.—*The American Journal of Obstetrics.*

Modern Obstetric Teaching.—Farnsworth thinks that pads, couches, and disinfectants should come under the ban as doing harm rather than good. He believes that cleanliness of physician and patient is the cardinal necessity. The scrubbing brush, boiled water, and fresh linen are essentials. Vaginal douches do harm by removing the natural mucus provided for lubrication and protection.—*The American Journal of Obstetrics.*

The Prevention of Puerperal Septic Infection in Private Practice.—Herman (*British Medical Journal*), considers bichloride of mercury the best antiseptic for obstetric practice. He draws attention to careful cleansing of the hands, sterilization of all instruments by heat and boiling, and the importance of thoroughly clean clothing. Internal examinations should be as infrequent as possible. The external parts should be thoroughly washed. As a lubricant for the finger, bichloride of mercury in glycerin 1 : 2000 is recommended. Healthy women do not require preliminary douches. Immediately after labor the physician should give a douche of bichloride of mercury 1 : 2000. If a hand or instrument has been introduced within the uterus, it should also be cleansed. If labor has been difficult, so that necrosis of the tissues is feared, a douche of bichloride of mercury 1 : 4000 should be continued twice daily. It is important that explicit directions be given to nurses, and this is best accomplished by printed rules giving careful details for their conduct.—*American Journal of the Medical Sciences.*

Tetanus following Abortion Successfully Treated by Antitoxin.—Withington reports in the *Boston Medical and Surgical Journal*, the case of a patient, aged thirty years, who had an abortion, denying positively any interference of a criminal nature with her pregnancy. Two days afterward she was seen by a physician who curetted and douched the patient, and one week later she was able to sit up. She gradually developed stiffness of the neck and lower jaw, with cramps in the legs. Her temperature varied from 100° to 102°. There was no evidence of sepsis about the abdomen or uterus. The patient gradually grew worse, with repeated attacks of spasm, with opisthotonos. Bromide and chloral were used in large quantities with no apparent result. She was able to take considerable quantities of liquid nourishment. Twenty-two cubic cm. of tetanus-antitoxin serum were injected; gradual improvement followed, she having received in all three injections upon successive days, a total quantity of 68 cubic cm. Her gradual recovery followed.—*American Journal of the Medical Sciences.*

NERVOUS DISEASES AND ELECTRO-THERAPEUTICS.

IN CHARGE OF
CAMPBELL MEYERS, M.D., C.M., M.R.C.S., Eng., L.R.C.P., Lond.,
Neurologist to St. Michael's Hospital. 192 Simcoe Street.

DIETETICS IN NEURASTHENIA.—Jas. G. Kierman, M.D., (*The Medical Standard*), says Neurasthenics are generally dyspeptic. They suffer from nervous dyspepsia, as the diagnosis has it. This is correct, and nowhere is the vicious circle in pathology more clearly established than in gastro-intestinal neurasthenia. Weak nerve centres interfere with normal gastric functions and again the products of a faulty digestion, being absorbed by the blood, poison in their turn the nervous centres, including those which preside over nutrition. In nine cases out of ten pepsin or some other reputed digestive ferments are prescribed and taken for months and years, again to the detriment of the patient. Many carry their dyspepsia powders with them, having become perfect slaves to the ferment. In many cases pepsin does direct harm, in others induces inactivity of the gastric glands on the same principle as predigested foods. The advance physician is prone to resort to the stomach tube and wash out the stomach. In some this is of great benefit, at least temporarily; in other patients the introduction of the tube marks the beginning of a period of intense suffering and of a series of collapses.

A tolerably reliable dietary injunction is: Do not eat anything raw. With few exceptions, which generally have to be learned by experience, the neurasthenic is apt to digest, under proper precaution, anything that is well done. Idiosyncrasies, however, ought always to be expected.

While this is most emphatically true and a great deal of most decided harm is done by manufacturing nosophobiacs through washing out the stomach and allied procedures in neurasthenia, still the mal-digestion and mal-assimilation problems present and evinced in lithæmia, glycosuria, oxaluria, and other evidences of perverted hepatic action and tissue metabolism do involve a question of no little interest from the standpoint of therapy and prognosis. Digestion and absorption of nitrogenous material is a problem solved with comparative ease. Digestion and absorption of starches and sugars is a much more difficult task. It is undeniable that in many cases of neurasthenia, starches and sugars would be of decided value could they pass the intestinal tube into the system. In children whose state closely resembles that of neurasthenics, degenerates and neurotics, starch and sugar are admissible not to be omitted from diet. The problem here as in neurasthenia is to pass them beyond the intestine. In my opinion the problem is excellently solved by the introduction of the product of fungoid action known as taka diastase. It can be dusted on the starchy food without interfering with its flavor.

Accident Neuroses.—A recent editoral in the *Boston Medical and Surgical Journal* discusses a contribution of Prof. Adolf Struempell in a late issue of the *Muenchener Med. Wochenschrift* (3rd and 10th December, 1895) on the subject of the results of traumatic shock, the much disputed so-called traumatic neuroses. It calls attention to the importance of these in a sociological point of view, the moral effect upon the community, and especially the working classes, of the more or less indiscriminate bestowal of damages, as in a measure perhaps more important than the purely medical side of the question. It is this last, however, that we have to do with here, and the conclusions of Professor Struempell carry considerable authority. He treats these symptoms mainly as a psychosis, a manifestation of hysteria, or hypochondria, or neurasthenia, and dwells upon the importance of treating it as such. The special diagnostic points, the anæsthesias, limitations of the visual field, etc., have had their importance overestimated, as has also the question of simulation, which may not exist in any conscious or responsible way, even when the physical symptoms are exclusively due to the mental state. Still he does not absolutely exclude all actual organic disease in these conditions, though he holds its occurrence must be rare. The occasional cases of actual mortality without obvious lesions certainly indicate this, and the newer methods of investigation into the finer anatomy of the nerve elements may yet prove that there is more often a material organic basis than he admits. The following are his conclusions, as given by the *Journal:*

"1. The name 'traumatic neurosis,' in its common acceptation, should no longer be used as the expression for a definite and special disease.

"2. It is probable that a true 'traumatic neurosis' exists in the sense of a chronic organic change resulting from a severe commotio cerebri or commotio spinalis. Such cases are, however, rare.

"3. The so-called objective symptoms of accident neuroses do not properly deserve the name. All such symptoms are dependent upon the psychical state of the patient.

"4. The distinction between simulation, purposive exaggeration, and a true neurosis is easy theoretically. Practically the difficulties in diagnosis are often great. The changing character of certain symptoms does not necessarily imply simulation.

"5. It is of the utmost practical importance, whenever possible, to prevent the onset of the neurosis. Palliation has a much more brilliant outcome than treatment when the condition is established.

"6. In all cases it is the duty of the physician to bring it about that the patient shall again gradually accustom himself to work."

The third conclusion is, perhaps, a little too positive, except as referring only to the hysterical anæthesias, etc. There must be in cases such as are admitted as probable in the second, some actual objective symptoms.

Nitro-Glycerin in the Treatment of Sciatica.—Dr. William C. Krauss, of Buffalo, N.Y., read a paper on this subject before the Medical Society of the State of New York, recently held at Albany.

Although skeptical in regard to new measures and remedies, in the face of the abundance of measures recommended, such as electricity, heat,

cold, acupuncture, nerve stretching, hypodermic injections, splints, extension, rest, cauterization, not to speak of the innumerable medicinal agents, he, however, tried Nitro-Glycerin and reported seven cases, all of which were speedily cured or greatly benefited.

The administration of Nitro-Glycerin should be as quickly as possible after the onset of the pain, whether it be neuritic or neuralgic in character; beginning with one minim of the one per cent. alcoholic solution and increasing until the peculiar physiological effects of the drug are obtained. Seven cases were reported and are here briefly summerized:

CASE I. Male; age 50—60; has been a frequent sufferer of rheumatism and sciatica for years. On Thanksgiving day, 1895, he was taken with an acute attack of sciatica. Various measures were tried without any effect and the case was turned over to the writer. Nitro-Glycerin in 1 minim doses of the one per cent. solution, three times daily, was prescribed and in three days the severe pain had disappeared, and after ten days the patient was freed from all sciatic pain.

CASES II. and III. were that of husband and wife, both suffering with acute sciatica. The husband, however, had been a rheumatic for some years and had also had gout. In two weeks' time under the Nitro-Glycerin treatment both were relieved of the sciatica.

CASE IV., that of a stenographer, used to sitting ten hours daily on a hard-bottom chair, began to complain of symptoms denoting a neuritic affection of both sciatic nerves. Nitro-Glycerin and rest thoroughly dispelled these symptoms and in a short time she was again able to resume her customary work.

CASES V., VI. and VII., were hospital cases, and received marked benefit from this form of treatment.

The disagreeable effects of the Nitro-Glycerin, as congestive headaches, flushing, etc., may be relived by the bromides.

The author does not claim that it will cure every case of sciatica, but if it relieves fifty per cent., it will be doing what no other single drug has heretofore done.

GRIEF FROM A MEDICAL STANDPOINT.—The nervous system requires complete rest after blows caused by sorrow. Recent medical observations show that the physical results of depressing emotions are similar to those caused by bodily accidents, fatigue, chill, partial starvation, and loss of blood. Birds, moles, and dogs, which apparently died in consequence of capture, and from conditions that correspond in human beings to acute nostalgia and "broken heart," were examined after death as to the condition of their internal organs, and it was found that the nutrition of the tissues has been interfered with, and the substance proper of various vital organs had undergone the same kind of degeneration as that brought about by phosphorus or the germs of infectious disease. The poison of grief is more than a man. To urge work, study, traved, the vain search for amusements, is both useless and dangerous. For a time the whole organism is overthrown, and temporary seclusion is imperative for proper readjustment. Grief can not be ignored, neither can it be cheered up. It must be accepted and allowed to wear itself away. Readjustment comes

slowly. Sorrow, grief, and all great misfortunes should be regarded as conditions similar to acute infectious disease, which they resemble in result; and, later, as convalescence from such disease. Seclusion, rest, sleep, appropriate food, fresh air, sunshine, interests that tax neither mind nor body, these are requirements in this class of illness.—*Charlotte Medical Journal.*

The Patellar Reflex.—The diagnostic importance of this in nerve pathology is well known; it is seldom wanting in healthy persons, even during sleep. It is usually exaggerated in cerebral lesions; lesions of the lateral columns; is wanting in degeneration of the posterior columns of the spinal cord, and in tabes, where it is an important symptom from the commencement of the disease, the return of the reflex indicating amelioration. There are, however, exceptions. Thus the reflex may return in an ataxic, suffering from an apoplectic attack. Pick has found that the sensitive medullary fibres transmitting the reflex, still contain healthy normal fasciculi. The reflex persists so long as the radicular zone of the cord between the dorsal and lumbar regions is not affected. The sensitive fibres conveying the patellar reflex are situated in this zone, but do not form a compact fasciculus.

Pick has also noted another exception. The brain exerts an inhibitive action over reflexes, which explains their exaggeration in cerebral disease. And it often happens that the patellar reflex is wanting in the paralytic insane, with lesions of the brain cortex; it is the same with lesions which diminish the cranial capacity. According to Meyer, in cerebral tumors, degeneration of the intra spinal prolongations of the posterior roots are found. Perhaps in this case the cerebral compression is extended along to the cord. Dinklen has, in fact, found the same lesions in hydrocephalus and in cerebral tumors. Pick has also described degenerative lesions of the prolongations of the posterior root in several cases of cerebral tumors, which would seem to confirm the above statements.—*La France Med.*

Sleep.—A very sensible article by Dr. W. J. Bell, of St. Joseph, Mo., appears in the November *Medical Herald* on this subject. We abstract two paragraphs. The author evidently reads the *Alienist and Neurologist.*

"Upon the patient's ability to procure refreshing sleep, more than upon any other factor, depends the prognosis in a given case. It would be well for the gynecologist, the surgeon and the man in general medicine, and better a thousand times for the patient if the value of sleep as a therapeutic agent were more fully considered."

"Too often has the surgeon's knife been given the credit for convalescence when ovaries, only partially diseased or not diseased at all, have been removed, or rents in the cervix or perineum too insignificant to mention have been sewed up. Careful weighing of the evidence in such cases will frequently show that rest in bed and regular diet with perfect sleep were the means of granting relief."

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

H. B. ANDERSON, M.D., C.M.,

Pathologist to Toronto General Hospital; Professor of Pathology Trinity Medical College, and in charge of the Trinity Microscopic Pathological Laboratory, Toronto General Hospital. 223 Wellesley Street.

GONORRHEAL ENDOCARDITIS.

Although a number of observers, including La Cassagne, Marty, Baudin, Moussons, and Desnos, long ago recognized endocarditis as a complication of gonorrhea, until recently little attention has been paid to the manner in which the inflammation of the cardiac valves is brought about by the urethral infection. Indeed, it is generally believed that blennorrhagic endocarditis is very rare, and most text-books on surgery, in discussing the differential diagnosis between gonorrheal rheumatism and ordinary rheumatism, point out that the absence of cardiac lesions is suggestive of the former. However, careful bacteriological examination of the lesions found in fatal cases of acute endocarditis indicates that gonorrhea may be a more important factor in the etiology of valvular disease than has been commonly supposed. Leyden was among the first to investigate the subject from a bacteriological stand-point. In the *Deutsche medicinische Wochenschrift* for September 21, 1893, he reports a case of chronic gonorrhea, with gonorrheal arthritis, which eventuated in an ulcerative endocarditis. Both the mitral and aortic valves were affected. In the exudation on the valves, micro-organisms corresponding in all particulars to gonococci were found in pure culture. After an exhaustive review of the literature of the subject up to that date he concludes that the relation of gonorrhea to endocarditis is proven by a great number of observations; that a part of these cases undergo a chronic course and become partially cured; that other cases undergo a malignant change and end in death.

In the *American Journal of the Medical Sciences* for September, 1893, Councilman presents an elaborate report of a case of acute myocarditis with hemorrhage into the pericardium, occurring secondary to gonorrhea. Both knee-joints contained a purulent fluid. Gonococci were found in the secretions of the urethra and joints, and in considerable numbers in sections of the cardiac muscle. Unfortunately, the case is not a complete one, owing to the fact that cultures were not made at the time of the autopsy, the organisms being studied only in cover-slip preparations, and in the sections. As the lesions did not resemble those produced by pus organisms, or even by pneumococci, and as the clinical course of the disease, especially the absence of fever, suggested a gonorrheal rather than a purulent infection, the writer favors the view that the myocarditis was excited by the gonococci, and not by a secondary accidental infection.

Fressel ("Endocarditis Gonorrhoeica," Inaugural Dissertation, Leipzig, Edelmann, 1894) reports the case of a young woman who was admitted to the hospital in a moribund state, with all the manifestations of severe cardiac affection. It was subsequently learned that four weeks before admission she had suffered with pain in one foot, and later had developed difficulty in breathing. A post-mortem examination showed ulcerative endocarditis of the mitral and aortic valves, and gonorrheal vaginitis. An examination of the exudation on the valves revealed diplococci which corresponded closely to gonococci.

Dauber and Borst (*Deutsches Archiv für klinische Medicin*, Band LVI, 1895) report a case of malignant endocarditis following gonorrhea in a man aged 20 years. Examination of the heart on admission showed no lesions, but on the eighteenth day after the appearance of the urethral discharge, symptoms of aortic insufficiency developed. Death resulted from septic nephritis and hypostatic pneumonia. Gonococci were detected in the urethral discharge by staining. The autopsy revealed extensive vegetations and ulcerations on the aortic valves. In the vegetations were diplococci, some of which had all the morphological and tinctorial properties peculiar to gonococci, and were within the cells. No cultivation of the urethral organisms was made. Cases similar to the foregoing have been published by His, Rothmund, Winterberg, and Hering. Unfortunately many of the reports upon the subject which have appeared are unsatisfactory, since staining alone has been relied upon to identify the gonococcus. Thayer and Blumer, however, have recently published (*Archives de Médecine experimentale*, November, 1895) a case of gonorrheal septicemia with endocarditis in which cultures of the blood were carefully made during life. The authors conclude that the organism found on the valvular vegetations was the gonococcus, for the following reasons: (1) Its form and disposition were characteristic. (2) Though often free, the organism was found within the protoplasm of the leucocytes in the valvular thrombus. (3) The organism did not develop in ordinary media. (4) It easily grew on a mixture of human blood and agar (one-third blood). (5) It decolorized by Gram's method.

These cases and similar ones which have been recently reported not only confirm Leyden's conclusions, but indicate that gonorrhea may cause endocarditis either by a secondary accidental infection or, perhaps, by a direct invasion of the valves of the heart by the gonococci themselves.—*University Medical Magazine.*

DECIDUOMA MALIGNUM.

On the evening of the first Wednesday in April there was a large gathering at the Obstetrical Society; the Fellows had assembled to hear the experience of experts on a grave subject. It is highly satisfactory to witness men discussing important but doubtful matters which we feel they are especially competent to handle. Hence the April meeting of the Society might be held up as a type or model of what an ordinary evening assembly of a learned association ought to be.

Two reasons brought many of the ablest of British obstetricians and gynæcologists to the meeting. In the first place no original communication on deciduoma malignum had hitherto been published in the British empire. The disease was first noted by Sänger in 1888. About fifty original scientific or clinical papers appeared between that date and last year in Germany, France, and Italy. As long ago as 1840 an English writer, Wilton, demonstrated, on the evidence of a case that the vesicular mole sometimes shows true malignant characters. A few abstracts published in our EPITOME between 1889 and 1894 turned the attention of English writers to this subject. Yet no original English communication on deciduoma malignum appeared until May, 1895. Then at last an English monogram was published, but it was the work of an American, Dr. Bacon, of Chicago, and the new case which he reported had been observed, not in any English-speaking land, but in Prague. Hence the Czechs, as well as the Germans, were before the Anglo-Saxons. In June a far more important communication was issued in English, but the author was another distinguished American, Dr. J. Whitridge Williams, and his work will require further criticism. In July, 1895, Mr. Doran noted the absence of any British report on deciduoma malignum in the course of a paper on placental polypus, read at the Society. The particular polypus in question showed, undoubtedly, placental tissue, yet there was no evidence from the clincial history nor from the microscopic appearances how far pregnancy had preceded the patient's death. Hence the histology and pathology of decidua and chorion came under discussion—a subject of interest, then, but of yet higher import, for well-known reasons, at the present moment. One reason is the question of what is really to be detected in the metastatic deposits in the lungs, etc., in deciduoma malignum. In January, 1895, Dr. Champneys, in the *Practitioner*, recorded his experience of some unusual cases of hydatid mole. In one instance he found nodules in the lungs, which made it probable, in his opinion, that the case was allied to those described as deciduoma malignum.

Hence there was a large attendance at the April meeting, as British experience of deciduoma is a novelty. There remains a second reason why the Fellows of the Obstetrical Society took an unusual interest in the papers selected for that evening. Many suspect that the very term —deciduoma malignum—is misleading, being based on a fallacious interpretation of microscopic appearances. That opinion was the subject of one of the communications which were then brought forward.

Mr. Rutherford Morison, of Newcastle-on-Tyne, contributed the first paper, an important clinical note on a case where the evidence that metastasis developed in the lung was clinically strong though, unfortunately, there was no necropsy. Dr. Herbert Spencer read a very full report of a case under his observation in 1889. By the aid of the magic lantern he demonstrated a fine series of photomicrographs. A short clinical and pathological report of another case was read by Mr. Malcolm and Dr. Hebb. The pulmonary metastases were very striking, and some microscopic sections, carefully prepared by Dr. Hebb, were exhibited at the meeting and much admired. Together with a large number of valu-

able sections illustrating Dr. Herbert Spencer's and Mr. Morison's papers, they were referred to a committee of experts for further scrutiny.

Those who are enthusiastic about medical novelties, however, would do well to study Dr. Eden's paper, which was also read at the April meeting. That observer has already issued valuable monographs on the histology and development of healthy placenta. In his opinion much doubt exists not as to the malignancy but as to the decidual character of primary tumor and the metastases. Professor Sänger first described deciduoma malignum as such; but Dr. Eden doubts that the primary and uterine tumor was made up of decidual cells in Sänger's case. Similar cellular growths, however, have been detected by Dr. Eden and others in the uterus, when their origin could not have been decidual. The same observer exposed a grave error from which the most famous writers are not always free. He showed that it was not clear in several foreign reports of this new disease that delivery or abortion had taken place before its development. A graver charge was made by Dr. Eden, for in some cases the primary disease was not clearly determined to be uterine. Thus, in Dr. Whitridge Williams's interesting monograph, which we recently reviewed, it is stated that the patient was attended in her confinement by Dr. W. E. Harris, who prescribed a lotion for a nodule on the right labium majus at the end of a fortnight. A week later he found that there was a rapidly-growing tumor on the labium. When admitted into hospital, a little over a month after labour, the tumor was sloughy, and the patient died two months later. Deposits were certainly found in the uterus and lungs; but the early history points, as Dr. Eden insisted, to the labium as the primary seat of disease. Dr. Harris, who must have examined the uterus, makes no note of any tumor in that organ.

The supporters of the deciduoma theory base their opinions to a great extent on the appearance in the metastatic deposits of essentially decidual or allied structures. But Eden shows that there is no uniformity of opinion about the minute histology of the fœtal appendages, and that the "syncytium" resembles plasmodia found in sarcoma not related to gestation. In short (and we understand that Dr. Kanthack agrees with him in most particulars) the disease known as deciduoma malignum may yet prove to be but a rapidly growing sarcoma. Pregnancy, so common, may easily coincide with sarcoma of the uterus, a rare disease which occurs during the child-bearing period. Histology may mislead. A sarcoma is made up of rapidly growing elements, but so are the normal fœtal appendages. Hence appearances observed alike in normal decidua and in common sarcoma may have been falsely taken as evidence of identity. The truth may be that these appearances simply represented rapid growth. Deciduoma malignum may yet prove a scientific delusion. —*British Medical Journal.*

AMOS FRANKFORD ROGERS, M.D

The Canada Lancet

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* DR, J. L. DAVISON, 12 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P.O. Orders to be made payable to* DR, G. P. SYLVESTER, Business Manager, 585 Church St,, Toronto.

AGENTS :—Eastern Agents, MONOHAN & FAIRCHILD, 24 Park Place, New York ; J. & A. McMILLAN, St. John, N.B.; Canadian Advertising Agency, 60 Watling St., London ; 5 Rue de la Bourse, Paris.

The Largest Circulation of any Medical Journal in the Dominion.

Editorial.

The subject of our sketch AMOS FRANKFORD ROGERS, the youngest son of the late John Barker Rogers, of Bradford, received his early education by private tutor and in the local Grammar school and Upper Canada College. He received his medical education in McGill University, Montreal, where he graduated M.D.C.M., in 1874. In June, 1874, he went to England, attended St. Thomas' Hospital, London, and the Royal Infirmary, Edinburgh, and received the degrees in 1875, of L.R.C.S., Edinburgh, and L.R.C.P., Edinburgh. He passed the examinations of the Ontario Medical Council in the spring of 1876, and began the practice of medicine in Ottawa, where he has remained since. In 1889, he was elected President of the Medico-Chirurgical Society of Ottawa, and in 1890, he contested the election for a seat in the Ontario Medical Council and defeated Dr. Cranston, who was President of the Council at that time. In 1894, the redistribution of Divisions threw Dr. Darley Bergin, M.P., and Dr. Rogers into one Division (No 17 Division) and in the election for a member of the Medical Council, Dr. Rogers defeated Dr. Bergin by a very large majority. In 1895, Dr. Rogers was elected Vice-President of the Medical Council and at the session just closed he was elected President by acclamation. In May, 1896, Dr. Rogers was married to Margaret R., eldest daughter of Dr. Alexander Falkner, of Williamstown, Ontario.

THE ONTARIO MEDICAL COUNCIL.

At the opening session of the Medical Council this year, Dr. Rogers, of Ottawa, was advanced to the presidential chair, and Dr. Thorburn, of Toronto, was made vice-president.

The first matter of importance taken up was the old question of matriculation. The council arranged it in accordance with the terms of agreement entered into by the Ontario Government, and the executive and legislative committees of the council at a conference held in March last. The terms of the above agreement were set forth in our May issue. It is a matter for sincere congratulation that this long-vexed question is

at length happily settled, and we hope no restless spirits, in the council or out of it may, for many a year, disturb the fair and equitable standard now in force.

Petitions were received from the medical faculties of Toronto University, Trinity Medical College, The Western University, The Woman's Medical College, and also one from all the students resident in Toronto, asking that an eight months' session be made compulsory, and that the summer session be abolished, as also the fifth year of study. In all, ninety-nine students signed the petition, the others not being accessible, having left the city before the petition was circulated.

Queen's was the only educational institution in the province which made objections to the proposed change.

The Educational Committee of the Council received deputations from Toronto, Trinity and The Women's Colleges, and the matter was very fully discussed. Several members of the deputations attached more importance to the lengthening of the session than to the abolition of the fifth year.

The Education Committee advised that spring examinations be deferred to the third Tuesday in May, in order to accommodate any school that might give an eight months' session, and that all students be allowed the summer session who presented tickets for an eight months' session, in all cases the fifth year of clinical work to remain. On this matter the committee was not unanimous. In committee of the whole Council, Dr. Williams moved that an eight months' session, with no summer session, but with the fifth year retained, be made obligatory in 1897. Dr. Britton moved that the summer session and the fifth year be abolished and an eight months' session be compulsory forthwith. Both motions were defeated, and the original recommendation of Education Committee adopted.

A committee was appointed, consisting of those members who expect to visit the Canadian Medical Association to confer with deputations from other provinces, to consider and report upon the question of uniform standards of matriculation, professional training, and uniformity in the manner of conducting professional examinations, as a step towards inter-provincial reciprocity in licensing.

After a long discussion in Council, it was decided to advertise for all printing, which was done by the Printing Committee. The chairman reported that lower tenders could probably be secured later on. Considering this, the matter of printing was left in the hands of Drs. Barrick and Emory with instructions that the annual announcement appear at as early a date as possible.

The question of a free journal to all licentiates came up, when it appeared that *The Dominion Medical Monthly* offered to supply a journal which should cost the Council *twenty-five cents* (*!*) while *The Review* wanted one dollar per year for each member of the college.

The good sense of the Council has at last got uppermost, and neither tender was accepted. It was decided that there should be no free journal hereafter. No *chromo* so to speak to each man who pays his annual fee. The opinion of the Council is that a verbatim report in the announcement

will justify proceedings, and that a subsidized journal is not necessary as an advocate, and further that the publishing business is not a natural function of the Council, especially when it interferes as it has done for the past few years, with vested interests, in the shape of all other medical journals published in Canada.

The receipt of fees from members during the past year have been very satisfactory. Numerous communications have, however, been received from members enclosing fees, but protesting against those who refused to pay being allowed to go free. This contention being absolutely just, the Council decided to reinstate the penal clause 41*a*, to come into force in December next.

The Ontario Medical Library Association, was equipped at its institution, and is now carried on entirely by the profession in Toronto. Its members in Toronto pay an annual fee of two dollars towards its maintenance. Every licentiate outside Toronto, is invited to make use of it free. In consideration of these facts the Council fixed the annual rental of the room occupied by the Association, at the nominal sum of one dollar.

The list of text books recommended to students was revised to meet the latest advances in medical science.

A committee consisting of Toronto members was appointed, with whom the prosecutor, Mr. Wasson, is to confer in order to make prosecutions more effective and less expensive. The members of the committee volunteered to do the work gratuitously.

The whole meeting was characterized by a better tone than has existed for some years. While it was seen and felt that strong convictions existed, less captiousness was shown by the leaders of the so-called defence association, and all settled down to hard work, with the result that the same work which last year occupied two weeks, was concluded in five days.

There was a better feeling shown all through the proceedings, pointing, we hope, to the speedy unification of the profession in the province.

THE ONTARIO MEDICAL ASSOCIATION.

In this issue is a full report of the proceedings at the late meeting of the Ontario Medical Association, held at Windsor, June 3rd and 4th.

The meeting was certainly a success so far as social enjoyment was concerned, but was not so large as former meetings; nor were the papers so numerous as heretofore. This was caused by quite a number of gentlemen having promised papers, and not eventuating when called upon, either in person, or by the presence of the promised paper to be read by some one else.

The quality of work was, however, good, and the discussions of the papers read most interesting and instructive.

The Western men, in their Committee of Entertainment, showed the proverbial western hospitality. Indeed the cheer was continuous, potent and well flavored.

The whole resources of the western store of Ontario and a part of Michigan were at the disposal of whatever doctor saw fit to use them, by day or night. Everyone who attended will long feel a deep debt of gratitude to That Committee for the good quality of the lemons and soda provided on the second morning.

Hiram Walker & Sons, Parke Davis & Co., Frederick Stearns & Co., and Messrs. Girardot, all vied in making it pleasant for the visiting doctors, and succeeded admirably. Few of our profession in the East knew of the extensive works and excellent wines manufactured by Messrs. Girardot in our own country.

Dr. Grasett is to be complimented on the manner in which he conducted the business of the meeting. An abstract of his address appears in our report.

THE ONTARIO MEDICAL ASSOCIATION.

The regular meeting of the Ontario Medical Association was held in Windsor, June 3rd and 4th; the President, F. LeM. Grasett, occupying the chair.

"The Treatment of Puerperal Sepsis" was the title of a paper by Henry T. Machell.

The death-rate from puerperal sepsis had lessened infinitely since the introduction of a septic and antiseptic principles into the practice of midwifery. But the statistics of deaths from "puerperal diseases" gave a most incorrect idea, not only of the amount of puerperal sepsis, but also of the number of deaths from that cause. For instance, in 1893, in Toronto, population 190,000, births 4,153, there were two deaths reported under the head of "puerperal diseases." Too often "malaria," "milk fever," "fever from mental emotion," "la grippe," were given to slight rises of temperature, a moderate tenderness over the abdomen and malodor of the lochia.

A knowledge of the causes of puerperal infection suggested the proper prophylactic treatment. The indication was to exclude bacteria: "no bacteria, no infection; no putrefaction, no suppuration." The essayist then pointed out the means whereby this could be brought about, except in autogenetic cases. These included healthy woman, clean house, clean room, clean linen, clean bed and bedding. The accoucheur's hands and nails should be thoroughly scrubbed for several minutes with a brush, soap and hot water, the nails cleaned and trimmed smooth, then the hands should be completely immersed for some minutes in an antiseptic solution. The examining hand should maintain this perfect condition all through labor. Little stress was laid on the pre-and post-partum douches. All tears should be attended at once. All decidua should be removed. If sepsis supervened a great point was to recognize it at once. The accoucheur should not delude himself by thinking he was dealing with some concurrent condition, but ascertain at once the nidus of the bacteria and the site of infection and treat promptly and strenously, cleansing grey spots, cauterizing with carbolic acid or Churchill's tincture of iodine;

douching and thorough curettement of the endometrium, with supporting constitutional treatment were fully detailed by the reader of the paper. The coal-tar products might reduce the temperature, but the sepsis would remain. They were to be condemned. Alcohol in the early stage was not advisable. Purgatives were indicated in every case—six or eight grains of calomel followed by magnesiun sulphate. To lower the temperature he recommended the cold head, and abdominal coil, and free sponging. If asthenia supervened, alcohol in quantities, free feeding, quinine, strychnine and other stimulants were to be relied on. The effect of the staphylococcus antitoxin was yet to be seen.

"Tongue-like Accessory Lobes of the Liver" was the title of a paper read by Alexander McPhedran, of Toronto. He said the chief interest in the subject was in connection with the diagnosis of abdominal tumors. These lobes of the liver were of great variety as to shape and position, and would often mislead one in the diagnosis of abdominal tumors. Riedel believed them to be caused by tight lacing, and traction by an enlarged gall-bladder were usually found in women. In the cases reported, tight lacing had had little to do with the production of the deformity, and the position of the gall-bladder at the lower part of the mass was an accident rather than a cause of its formation. The essayist reported 7 cases he had had in which these accessory lobes were found. In most cases they had occurred with some intercurrent abdominal disease, an operation for which, revealed these structures.

The president then read his annual address, which is in part, as follows:—

The association aims to bring together, he said, men from all parts of the province, and this time it welcomed the special contingent of the profession from across the border. The speaker said he thought that this province might feel a sense of gratification in knowledge of the fact that it was not behind in matters of medical science and progress. In Toronto alone there were three flourishing medical societies. The president then referred feelingly to the losses the association had sustained by death. He said that matriculation in medicine in Ontario has been lately in an anomalous state. The Medical Council in requiring a special certificate, and none other, inflicted an undeniable hardship in some cases. The growing feeling of discontent had been met by a compact, which will almost certainly go into force at the next meeting of the council. Reciprocal registration between Canada and the United Kingdom has so far yielded no practical results, but the speaker thought desirable results could be obtained when registration between the several provinces of the Dominion was secured. If a graduate of Ontario, passing with the highest honors at the Provincial university, stamped with the hall mark of the College of Physicians and Surgeons of Ontario, to say nothing of the newer and more distinct provinces, could not practise his profession in the United Kingdom how can we ask with any reasonableness reciprocal registration from Britain. The speaker thought that if the interprovincial registration difficulties could be overcome there would not be much trouble in securing recognition of the members of the profession in the United Kingdom.

Not quite 15 years ago, Koch announced to the world his great discovery that a specific bacillus is the primary cause of tuberculosis, establishing as an undoubted fact what many had even before this regarded as highly probable. All objections that this characteristic bacillus was not the cause of the disease, were, by the multiplicity of confirmatory evidence in all parts of the world completely met. In the same way the infectious nature of the virus was completely established, not only by inoculation in susceptible subjects, but also by contact of an unprotected surface and matter holding the specific germ. If then the infectious element in tuberculosis abides in the secretions of the parts affected, is it not wise to control this avenue of propagation without unduly pressing on the patient and his friends. How far this is desirable all at once is a question. Perhaps for the present it is wiser to educate and enlighten the mass of the people on this subject, pointing out in simple, unmistakable terms, the nature of the disease, how easily it is communicated, how one can best protect himself and his friends from the spread of the disease leaving for the future any more radical action. This year sees a beginning made in a measure for the sanitarium treatment of cases of tuberculosis in our own country. The national Sanitarium Association has been incorporated, a board of wealthy and influential men in different parts of the country has been chosen as its directors. Before long we hope to see, not in Muskoka only, but also in the Rocky Mountain section of our Northwest, several buildings specially erected on favorable spots to receive and benefit, and often cure, those who without such surroundings could have nothing to hope for, but await the lingering and incurable end. Already the Association has received pledges of $70,000 for its purposes. A most satisfactory and well sheltered site of 40 acres of bush land near Gravenhurst has been secured, with the option of purchasing 30 additional acres adjoining. Plans have been drawn, contracts let and before long the first Cottage of our Canadian Sanitarium for tuberculosis will be erected. The ever increasing mortality from tuberculosis like a plague mark, is estimated at 1 in 7 for destruction. The failure of all so called specific treatment for this disease, and the amazing results secured by the advocates of the hygienic and dietetic treatment in these sanitariums which treat exclusively for consumptives, makes one glad that at last we have such a one at our own doors. Such treatment is not a new idea. It has been used since Hippocrates, and many places in Switzerland, Germany, England and elsewhere have long been used in this way. I believe it may be set down to the credit of the United States that the Adirondack College Hospital at Saranac Lake, New York, was one of the first of these institutions to open its doors to the poorer class among phthisical patients. I can myself bear testimony in my own experience to the great good my patients have received from a residence in the Adirondacks in this place. Dr. Osen recently said: "We are finding Trudeau Sanitarium in the Adirondacks a perfect Godsend. Why, I can put my hand on not less than a dozen young men whom we sent there with undoubted phthisis, who returned to us well and who remained well." I do not wish to intrude upon the address a medicine which deals with the treatment of Tuberculosis, but I could not refrain from referring to the beginning of the Sanitarium treatment in our province.

"The Operative Treatment of Mammary Carcinoma." A paper thus entitled was read by William Burt. The essayist quoted Halstead's deliverance that cancer of the breast is a curable disease if operated upon properly and in time. Cheyne results showed 57 per cent. of cures as obtained by using the three-year limit. He (the speaker) thought it would be well to adopt the four-year limit. These results had been obtained by doing the "complete operation." With one surgeon this meant the removal of the breast and axillary glands, fat and fascia in one piece; with another, the removal of the pectorals as well and the supraclavicular glands; others, the periosteum to which the muscles are attached; another, the cutting through of the clavicle for the better removal of the glands. The essayist preferred the term "wide" instead of "complete."

He held that an early diagnosis was of very great importance. If women were taught that a large number of cases of cancer of the breast were curable by an early and wide operation, he believed few would refuse operation. Diagnosis of malignant disease early was often difficult, and to do the wide operation for a benign swelling was criminal, the teaching to operate on every breast tumor after thirty-five was neither logical nor surgical. The reader then reported two of his cases in which the wide operation had been done. In one, two inches of the axillary vein required removal, as it was involved in the cancerous gland mass.

As regards the origin of secondary growths as a local recurrence, he did not think that the mutilation of the knife—that the wound itself—was a primary source of them. The functional disability produced by the wide operation of Halstead and Meyer was not as great as one would suspect. By means of the anterior fibres of the deltoid a woman was able to dress her back hair. It would take a couple of decades yet before the question of percentages could be adjudicated upon.

Dr. A. B. Welford, in discussing this paper, spoke of the influence antiseptic methods had on reducing the mortality of this operation. He gave a resume of some twelve cases. Of one of these he said:—

In speaking of the possibility of secondary deposits in the brain from primary breast carcinoma, a patient of mine, the last one operated upon, presented very rare and interesting symptoms, and in all probability adds another proof to the series in the production of diabetes insipidus by pressure or irritation of a definite coarse lesion in the floor of the fourth ventricle. Mrs. B. aet. 81. had a small scirrhus nodule a little above and to the right of the left nipple, of two and one-half years' duration, which was giving her great pain. The axillary gland did not seem to be affected. There was great thirst, and large quantities of urine being passed, from 17 to 20 pints daily; temperature normal, and other symptoms generally found with polyuria. The tumor, breast and axillary glands were removed, the latter being distinctly infiltrated. The wound healed nicely. After operation the urine gradually began to diminish, until before death took place it was down to 4 pints in 24 hours. Considerable nausea and some vomiting continued every day, and at the end of two weeks increased. She gradually became drowsy, temperature sub-normal, respira-

tion slowed, pulse feeble and varied between 109 and 140. She could be roused, and talked rationally at times; pupils equal. Three days later, the drowsiness deepened into coma; pupils became unequal, left much dilated when death ensued. No post-mortem could be obtained, but the case was so identical with one reported in the London *Lancet*, Oct. 11th, 1890, page 767, under the care of Mr. Walsham, that I feel fairly convinced that we had a case of secondary deposit in or near the floor of the fourth ventricle, as in Mr. Walsham's case it was verified by post-mortem. What pathological change took place as the result of the operation whereby the urine was so much reduced in daily quantity? or was it only a coincidence? The same fact was noted in the case referred to.

G. T. McKeough, in discussing this subject, called attention to the very poor results of the very best operators until recent years. Dennis reports 38 cases with 45% having passed successfully the three year limit. Halstead has had 50% of cures. These results were due to more perfect technique, antiseptic and aseptic precautions and a better knowledge of the pathology of carcinoma, the precise manner in which it spreads and affects surrounding tissue. He emphasized the importance of early operation and outlined carefully the steps in the operation.

"The Preservation of the Perineum," was the title of a paper by C. B. Oliver. He said, in part:—"When the perineum is rigid and undilatable, it has been my practice to introduce two fingers of the right hand into the vagina, and with each pain stretch the perineum in advance of the head. I have often found extreme rigidity disappear in a few minutes under this treatment. The patient's attention being occupied by the severity of the pain, no objection is ever raised to this procedure.

When the head begins to distend the vulva, our real work begins. Full expansion has by this time been secured. Two fingers are introduced behind the occiput, and this part of the head is brought well down under the pubic arch. The diameter of the head passing through the outlet will thus be materially lessened, and so also will be the tension on the perineum. Although by this step an almost inappreciable lessening of the diameter may at times be attained, it may still be sufficient to prevent serious laceration. Attention to this practice should be a routine practice.

Of the various methods which have been advocated by older writers, for the prevention of perineal laceration, it is best to say nothing.

Unless the physician feels that he has both perineum and head under complete control, he will suffer the mortification of witnessing frequent lacerations. There is only one method which, to my mind, meets the necessary requirements. Olshausen and others have advocated the plan of expelling the head in the interval between pains by means of the thumb or finger in the rectum, but as far as I can learn, this practice has not been very widely adopted. Four years careful study has convinced me that this is the method par excellence. The second finger of the right hand is introduced into the rectum beyond the child's chin. The disengaged left hand is used to press the perineal tissues from each side towards the median line, and while the patient is cautioned not to bear down, the head is brought into the world at the will of the operator.

No one who has not tried this method can appreciate the absolute control it affords you over the movement of the head. A thumb in the rectum will often answer equally well.

The next paper on the list was a most able one by Dr. Harvey, of Wyoming, Ont., on " Broncho Pneumonia in Children."

The Doctor said that broncho-pneumonia or capillary bronchitis was to be found in children from childbirth to the age of seven years, though if found after five years old, the child will be most likely undeveloped, strumous and delicate. After dealing exhaustively with the anatomy of the lung both in fœtal life and in childhood, and stating the condition of the parts when affected with the disease, he gave a most learned discourse on the pathology, causes, symptoms and termination of capillary bronchitis, giving, as to cause, its predisposing and exciting causes, and averring that resolution should always be the physician's hope and aim in treatment.

In treatment the doctor insisted on good ventilation and steam moistened air, and if the patient's temperature should rise above 101°, he advises sponging with tepid or cold water every few hours. He prescribes mercury in one of its combinations, to keep the bowels in a relaxed state.

Emetics should be exhibited where there is a cyanosed, lethargic state or where bronchial respirations are present.

The doctor believes in stimulants in all stages of the disease, and expectorants and febrifuges as the case demands. As to nervous stimulants, Dr. Harvey considered that it was best to begin their use before the heart's action begins to fail. Above all, he has great faith in strychnia, for which he claims—1st, it excites the vasomotor centres and contracts the arteries; 2nd, It increases the blood-pressure, and will thus keep up the circulation with a weaker heart; and, 3rd, it increases the excitability of the respiratory centres, which keeps up respiration in spite of the sedative action of sepsis and dioxide. The doctor advises that strychnia should be administered early and up to convalescence, beginning with 1-60 of a grain.

After speaking of counter-irritation and hyper-oxygenation, Dr. Harvey concluded by stating that, of course, the feeding of the patient should be most carefully looked after.

The next paper was one on ' Diphtheria and its Treatment," read by Dr. Charteris, of Chatham.

The Doctor described the general symptoms of diptheria, and said that he treated it locally with weak astrigents as Tinct. Ferri, Mur. Potas. Chlor. listerine and carbolic acid, or solution of peroxide of hygrogen. He administered internally quinine in fair sized doses and strychnia in small doses. The Doctor stated that he was anxious to elicit a discussion on the subject of the treatment of the disease by antitoxine. He quoted the large number of cases reported which had given way to the latter remedy.

He said that he had used it himself with excellent results, but thought that it should only be used in those malignant cases where the larynx was involved. The administration of the drug, the doctor said, was very easy.

In his opinion the injection of the solution should be repeated in twelve hours, and that a third, and even a fourth may be given. He stated that the effect of the remedy was well shown in twelve hours, and that he had known cases to exhibit entire resolution in from fifty to sixty hours.

The Doctor, in conclusion, said that limited time prevented him from giving the general treatment of Diphtheria, but that a nourishing diet and surrounding antisepsis were of great consequence.

A paper entitled "Phthisis as a Factor in the Causation of Insanity," was read by Dr. E. H. Stafford, of Toronto, in which the writer brought some statistics to bear upon the relationship existing between phthisis and insanity. While the fact is noticeable that among the insane a very frequent mode of death is by consumption, the latter disease itself does not as often cause insanity: the disease in the majority of cases running its course without any unusual mental symptoms beyond perhaps the *spes phthisica.*

The frequency of phthisis in some other classes beside the insane seems, the writer thought, to suggest that the disease does not attack all members of the community indiscriminately, but rather those who present some form of degeneration.

SURGICAL SECTION.

Dr. T. K. Holmes reported some surgical cases. The first patient was a man aged forty-four who had suffered from pain in the stomach and hypochondriac region, so severe that gall-stones were suspected. None, however, could be detected and there was no jaundice. He had failed greatly in weight and complained constantly of severe dyspeptic symptoms and what he described as a drawing or twisting of the bowels. He had a fear of being left alone. Local palpation of the abdomen revealed a large movable right kidney, which could be displaced beyond the median line and descended freely with each inspiration. The technique of the operation of anchoring it was fully described by the essayist. An interrupted recovery followed with a complete disappearance of the symptoms. The Doctor discussed the bibliography of the subject. The second case was a description of the operation of nephrectomy for renal tumor, which dated from an injury to the left side. The third case was the report of an abdominal hysterectomy.

He followed the following order:

1. Opening the abdomen.

2. The ligation of the ovarian vessels near the pelvic brim, either on the right or on the left side, slanting them toward the uterus and cutting between.

3. Ligating the round ligament of the same side near the uterus, cutting it free, and connecting the two incisions in order to open up the top of the broad ligament.

4. Incision through the vesico-uterine peritoneum from the severed round ligament across to its fellow, freeing the bladder, which is now pushed down with a sponge so as to expose the supra-vaginal cervix.

5. Pulling the body of the uterus to the opposite side to expose the uterine artery low down on the side opened up. The vaginal portion of the cervix is located with the thumb and the forefinger and the uterine

artery, seen or felt, is tied just where it leaves the uterus. It is not always necessary to tie the veins.

6. The cervix is now cut completely across just below the vaginal vault, severing the body of the uterus from the cervical stump, which is left below to close the vaginal vault.

7. As the last fibres of the cervix are severed or pulled apart, while the body of the uterus is being drawn up or rolled out in the opposite direction the other uterine artery comes into view and is caught with artery forceps about an inch above the cervical stump.

8. Rolling the uterine body still farther, the other round ligament is clamped and cut off and lastly ovarian vessels are clamped at the pelvic brim and the removal of the whole mass consisting of the uterus, tubes and the ovaries is completed.

9. Ligatures are now applied in place of the forceps, holding the uterine artery, round ligament and ovarian vessels; if the surgeon prefers, these may be tied as they are exposed without using the forceps.

10. After the enucleation the operation is now finished by closing the cervical tissue over the cervical canal and then by drawing the peritoneum of the anterior part of the pelvis (vesical peritoneum and anterior layer of the broad ligaments) over the entire wound area and attaching it to the posterior peritoneum by a continuous cat-gut suture.

Dr. Holmes' paper was then discussed :—

Dr. Carsons felt that it was very difficult to decide when it was best to perform the operation of nephrorrhaphy and on his own part left such patients alone until the symptoms became serious. Fibroid tumors on the contrary he thought should be removed at once.

Dr. Eccles, of London, pointed out the difficulty of making a satisfactory diagnosis. He had on more than one occasion tried manipulation of the greatly dilated kidney when large quantities of urine would be passed. He also advised the use of the urethral speculum and the insertion of a tube in the ureter for the easing of the passages.

Dr. McGraw, of Detroit, observed that gall stones may be mistaken for floating kidney. The gall bladder at such times may be quite as moveable. Moreover sewing the kidney makes a powerful mental impression upon a hypochondriac patient.

Dr. McLean, of Detroit, also touched upon the mental impressions produced by such operations and pointed out that some fibroids are best left alone.

Dr. Metcalf described a case of floating kidney where fixation of the organ was followed by immediate improvement.

The treatment of abortion was a paper read by Dr. McKeogh, of Chatham.

Dr. Longyear opened the discussion by stating that he thought it barbarous to resort to so much manipulation, and distasteful both to practitioner and patient. He also exhibited a special form of forceps for withdrawing the bag from the uterus, a proceeding which he was assured entailed much less inconvenience than the use of the tampon.

Dr. Harrison, of Cleveland, advocated the use of the dull spoon curette supplemented by a thorough washing.

Dr. Spence, of Toronto, deprecated the felicity with which most "written operations" are conducted, and maintained that no instrument could be as satisfactory as digital examination.

The evening session was opened by a demonstration of the Roentgen Rays and a discussion of the value of the new discovery in surgical diagnosis.

Dr. H. C. Scadding exhibited Hewitt's apparatus for the combined administration of nitrous oxide gas and ether. He pointed out that this form of anæsthetic possessed special advantages. It was a very safe anæsthetic, it acted quickly and was an agreeable one to administer.

The second apparatus shewn was for the administration of nitrous oxide and oxygen. This was the best anæsthetic for dental work. There was no embarrassment of the respiration or of the circulation.

Dr. Cruickshank read a paper on "The Differential Diagnosis of Typhoid Fever." He said:—

"Not long ago a mortality of 17 per cent. was considered a good result, but Brand's revival of the cold water cure reduced this one-half, while Dr. Thistle, of Toronto, by an elaboration of another plan claims to have reduced the death-rate much more. A Dr. Woodbridge modified this same plan into a specific and claims to show that the mortality is less than one per cent. producing in evidence a list of cases. Reputable physicians, however, reply that the majority of such cases were not typhoid at all. But the sincerity of either side cannot be doubted, so the diagnosis of typhoid fever becomes a matter of a good deal of concern to some of us. The doctor then referred to the "peculiar opportunity" Windsor had of studying the disease lately, and detailed the recent pollution of the water supply by the manure from the cattle barns. The relative positions of the Walkerville sewer outlets and Windsor intake were described. Under ordinary circumstances it is almost impossible for the small outflow of sewage to get out 50 feet on such a river, but to get out 200 feet in a current of three or four miles an hour with the intake 40 feet down must no doubt be a rare occurrence. Eight days after the pollution of the water supply by the opening of the shore intake took place a remarkable outbreak of fever, and the diagnosis of this was his text. There was some difference of opinion as to the nature of this fever among the local physicians. He would say nothing of typhoid arising out of a great variety of other diseases where there is no dispute; the real difference of opinion begins with mild and abortive fevers. One says typhoid, another says only malarial, bilious or continued fever, or something else. It may be that the difference in death rate is not caused so much by difference in treatment as in difference of diagnosis. It would seem easy to-day with the microscope to decide as between typhoid and malaria. In Windsor for a number of years there has been no case of intermittent fever, and therefore no continued malarial fever. A malarial patient may, of course, contract typhoid, but this would not lessen the virulence of the typhoid. A mild fever could hardly be typho-malarial, and typho-malaria could not occur where there was no other evidence of malaria. The doctor's reasoning, of course, led up to the conclusion that the late outbreak was of necessity typhoid, of a mild character gen-

erally, but still the true typhoid. Troubles began, he said, when it was attempted to distinguish a mild case of typhoid from one of simple gastric fever. During the outbreak there were over 150 cases, some lasting one day and some two months. Of these he had 34 in his own practice. The doctor then went into a minute description of several cases from attack to convalescence. Some held that typhoid never aborts, but while he did not claim that typhoid can be aborted or that he could do so, typhoid certainly does abort. The doctor went on to show that in the recognition of typhoid no one symptom was essential nor can any two or three be mentioned which may not be irregular or absent in undoubted cases of typhoid, and on the other hand there is not one of the usual symptoms which may not be present in other diseases. Cases were quoted in support of this position. Much had been expected from bacteriology, but it had failed. Osler says the death rate is 7½ per cent., and the essayist seemed disposed to pin his faith to this figure. In conclusion the doctor said that to distinguish gastro-intestinal fever from typhoid was often impossible. A mild case of continued fever might be typhoid, and a fatal one gastro-intestinal. In prevalence of typhoid we should presume the mild cases are typhoid. The death rate of any hospital is not a criterion for private practice. He emphatically disputed the statement made by a speaker of the previous day, that a case which did not run 20 days was not typhoid at all."—*From Windsor Press.*

"The Absorbable Ligature in Abdomnial Surgery," was the title of a paper by M. V. Mann, of Buffalo. The ligature referred to was the cat-gut. He called attention to the disadvantages of silk, and the treatment of the peidcle by cauterization.

The cat-gut did away entirely with some of the danger following an infection, which sometimes occurred. The ligature is softened, liquifies and disappears. The cure of the abscess or sinus is not complicated with the presence of a continuous focus of infection. One objection made against cat-gut was the difficulty of rendering it aseptic. He had proven that by the method of sterilization he had adopted, the material was completely sterile. This could be done by the dry sterilization or by boiling in Kumoll, placing in solutions of sublimate in ether or soaking in formaline solution.

To prevent slipping—another objection raised—the gut should never be used after having been placed in water, unless prepared by the Kumoll or formaline process. If taken from alcohol the slight tendency to slip could be overcome by simply pulling firmly upon the strands, or having his assistant do it for him, while he makes the second turn in the knot. By using the knot of Dr. Hanks, in which one strand is put through the second loop twice, all danger of slipping is absolutely done away with.

Dr. W. B. Geikie opened the discussion in medicine on "the treatment of phthisis." The remarks first referred more particularly to the treatment of the patients in the pretubercular stage. Then he discussed the value of the specifics generally used when the disease had established itself; and also those medicines best fitted to treat cough, diarrhœa and other symptoms.

In discussing this paper, Dr. Hodge, of London, said to effect a cure in phthisis, an early recognition of the disease was necessary—even in the

"silent stage" when the prominent symptoms were anaemia, debility, cough and quickened respiration. Early hæmoptysis because it directed early attention to the condition of the lung was a favorable symptom. A tendency to a fibrous rather than to a caseous metamorphosis was a favorable condition. Absence of excessive tissue sensibility, of hereditary taint, the inoculation with a mitigated virus, admission of the bacilli through the respiratory passages rather than through the vascular apparatus, a sound organic state of the patient,—all these were favorable to treatment. The two lines of treatment were the attacking of the bacill direct, and the fortifying treatment. The latter was the most satisfactory. Fats and proteids should be pushed, except in dyspeptic cases, when liquid food, easily digested, should be given. As to alcohol he was not very favorable; if given at all, it should be administered at meals and in small doses. The dwelling should be well ventilated and lighted, and situated on a dry soil. Storm windows should be discarded. The question of climate, exercise, bathing, clothing, medicinal treatment, were each concisely discussed.

As to anti-specifics, the essayist spoke of tuberculin anti-tubercle serum, aseptolin; but he believed creasote to be the remedy *par excellence* along this line.

TWO CASES OF SLOW PULSE.

This was the title of a paper read by P. A. Dewar. He said the causes of irregular and slow heart's action were so numerous that the difficulty in any one case was not in assigning as the causation of the trouble (to the patient at least) but rather in determining which one of the many causes was to be credited and relieved if possible, thereby treating the ailment in the only logical way. Pepper had mentioned a case in which the pulse was 22. Flint had mentioned cases as low as 26; but these were either functional or of a temporary nature. The two cases the speaker had to report were, he believed, the result of intra-cranial trouble. The first patient shewn was a man 63. He gave the history of rheumatism and malaria. Two years ago he consulted the essayist. He was pale and haggard. The respirations were sighing, the digestion faulty. All the organs seemed normal except the heart. Its beat was strong and regular. The rate was 22 per minute, unaffected by position or exercise. It dropped to 16. Rose to 36. Frequently fell to 20. Of late he had distinct attacks of pelit mal. The pulse lately had become rapid, weak and irregular. The second case gave also an epileptic history. The pulse beat about 25. The members examined the patients.

"Occipito-Posterio-Positions," was the title of a paper by A. A. McDonald. Authorities differed as to the frequency of these cases, and also as to their importance. Some held that they occurred frequently, others that they occurred rarely. Some held that nature looked after the majority of such cases, and that labor terminated easily. Others held that it was one of the greatest obstetric difficulties. In a case recently reported, where the occiput had rotated into the hollow of the sacrum, the mother and child had both died. The essayist discussed the causation of this condition, and then referred to the diagnosis. The diagnosis, he said, was often difficult, and required the introduction of the hand,

the patient being anaesthetised. Diagnosis then being ascertained, treatment could at once follow by turning the occiput into the anterior position, the shoulders and body being turned at the same time. The Doctor then reported four cases in which this condition of affairs was present, and where turning led to an easy and rapid delivery.

"Missed Abortion" was the title of a paper by F. R. Eccles. This was a subject that lay on the border-land between obstetrics and gynecology. It was important from a medico-legal and also from a moral point of view. The condition was difficult to diagnose. In missed abortion the patient may have gone the whole period of gestation, and the uterus be no larger than at the third month.

Just how long the blighted ovum might be retained in the uterus was an unanswerable question; some put the limit at nine months,—a mere *arbiter dictum*. The symptoms were vague and uncertain in most cases. There have been symptoms of pregnancy which have lessened or entirely disappeared. Irregular losses of blood with more or less pain and uterine contractions have been noted, and in looking back, one infers that the fœtus died about the period in which the said symptoms occurred. Then there was the history of deranged health. Placental polypus, myoma of the uterus and ectopic gestation were to be considered in the diagnosis. The treatment, once the diagnosis was established, was to empty the uterus under anæsthesia.

The essayist then reported the history of cases.

Dr. Primrose read a paper on amputation at the Hip for Advanced Tuberculous Disease.

"Conservative Surgery of the Eye." This was a paper read by Dr. Reeve, which will appear in THE CANADA LANCET.

The next paper was read by title, being one by Dr. J. M. Cotton, on "Haemoptysis."

As to the causes of haemoptysis, the Doctor divided them as follows:

I. Hæmorrhage from the pulmonary artery or its radicles.

(*a*) Rupture or wound of the lung from external violence.

(*b*) Active hyperæmia of lungs, vicarious, or induced by violent effort or excitement.

(*c*) Mechanical hyperæmia of the lungs.

(*d*) Necrotic divisions of vessels in lungs.

(*e*) Aneurismal dilatation or simple erosion of branches of Pulmonary Artery.

(*f*) Primary Atheroma of the pulmonary artery within the lung.

II. Hæmorrhage from the bronchial capillaries.

III. Hæmorrhage from the Aorta or one of its great branches.

After reciting some interesting cases of severe hæmorrhage, in three of which there was an entire absence of tubercular bacilli in the spatum, the Doctor stated that although pulmonary hæmorrhage occurs in all stages of phthisis, the reason that hæmorrhage was not always present was because the contents of the vessels usually undergo thrombosis.

The writer said that hemorrhage in the early stages of phthisis was sometimes beneficial, relieving congested areas, and causing the patient to take greater care of himself by having his attention drawn to this symptom.

As to the treatment of pulmonary hemorrhage, the doctor advocated rest, fresh air, freedom from anxiety, broken ice dissolved in the mouth, and a full hypodermic of Morph: Sulph: $\frac{1}{4}$ to $\frac{1}{2}$ gr. with $\frac{1}{100}$ Atrop: Sulph:

If bleeding still continues under this treatment, he advised half drachm of Turpentine in Emulsion.

After the Hæmoptysis has ceased the Doctor has great faith in the inhalation of creasote, iodine, eucalyptus or pinus sylvestris with lots of chloroform added as a sedative.

In conclusion he gave a case of hæmoptysis connected with cardiac disease, which, he said, was purely mechanical, and due to obstruction and reversal of the circulation.

The committee on necrology made their report which was adopted.

The committee to consider the question of lodge practice reported that it could not propose any fixed scheme yet applicable to the whole province, but they strongly condemned the growing evil and recommended that an effort be made to have each society in the province take the subject into its consideration and pledge itself in every way whatever to making lodge practice by any physician discreditable. This pithy report was signed by Dr. J. Spence, of Toronto, chairman, and was adopted.

A cordial vote of thanks was tendered to the profession of Windsor for the hearty and munificent manner in which they had entertained the visiting members of the Ontario association.

The officers elected for the year are :—

Pres., Dr. Coventry, Windsor.
1st Vice., Dr. Eccles, London.
2nd Vice., Dr. Clark, Kingston.
3rd Vice., Dr. Machell, Toronto.
4th Vice., Dr. J. P. Armour, St. Catharines,
General Sec., J. N. E. Brown, re-elected.
Asst. Sec., E. H. Stafford, Toronto.
Treas., Dr. Carveth, Toronto.

Toronto was chosen as the next meeting place.

CORONERS.—The following gentlemen have been appointed Associate Coroners:—Dr. John Marks Stewart, of Chesley, for Bruce; Dr. Alfred Skippen, of Grand Valley, for Dufferin; Dr. Michael James, of Mattawa, for the district of Nipissing.

BIRTHS.

On June 6, 1896, at Woodville, the wife of Dr. McKay, M.P.P., of a son.

At 325 College Street, on the 21st inst., the wife of A. R. Gordon. M.D., of a son.

MARRIAGES.

At Port Hope, June 25th, James Whiteside Bridges, M.D., of Frederickon. N.B., to Mabel Gertrude Metcalfe.

At the home of the bride's brother, Charles F. Farnsworth, Memphis, Tenn., on the 2nd ult., Ethel, daughter of the late Thos. Ripley Farnsworth, to Dr. Geoffrey Boyd, of Toronto.

The Canada Lancet.

VOL. XXVIII] TORONTO, AUGUST, 1896. [No. 12.

THE CAUSES OF MENTAL IMPAIRMENT IN CHILDREN.

BY DR. J. MADISON TAYLOR, A.M., M.D., OF PHILADELPHIA.

Probably no one factor so largely contributes to the increase of the dependent classes as abnormalities of mind or morals begun in children. The causes conditioning these states are the fundamental ones which underlie all insanity and crime, and have been discussed in the earlier essays of this series. It is my privilege to call attention with some particularity to those phases of the matter which are less conspicuous, but yet from the nature of the subjects, young persons, rich in possibilities of remedy.

It is entirely impossible to do justice to the subject in so brief a paper, but this will serve as an introduction to the subject on some future occasion. It is enough if I can here suggest avenues of research, and may myself learn something of the subject by pursuing it further. Above all I could wish the general practitioner might become interested in searching into causes and making and recording observations in these lines. Successful treatment of insanities depends upon the prompt recognition and judgment of the family physician. He may thus avert unspeakable evil from those in his keeping, and he must aid the specialist to the uttermost, both by keen observation and by promptly bringing suspicious tendencies to the notice of alienists. He it is who has the opportunity to note the potentialities of families—their trophic energies, their resisting powers, susceptibility to toxic influences, the stability of their nerve cells. His is the privilege of setting aright, when possible, evil traits, and remedying faulty educational plans, and detecting those sensorial defects on which depend abundant developmental possibilities.

The causes of mental impairment are twofold—remote and immediate, or essential and accidental. My friend, Dr. Pearce, in a paper attached to this has gone into statistical detail, presenting with much clearness well-accepted views and a large amount of entirely new data. He sheds some light on the subject of etiology. Our sources include reports from Elwyn and Vineland School for Feeble Minded Children, where I am on the consulting staff, data and opinions from my friend, Dr. Tomlinson of St. Peter, Minn., the California Home for Feeble Minded Children, the private school of the Misses Cox and Bancroft, and that of Mrs. Seguin, and researches among the dispensary records of the orthopedic hospital, where we are on duty.

The real fundamental essential causes of mind impairment are those degenerative influences which have to do with producing instability of the nervous centres and cells, *unavoidable because finished.* The determining or exciting causes are of great variety, *avoidable possibly* and rarely, almost never such as are capable alone of producing mental degeneration. While of vast importance to study the real causes, little can be done to influence them except by movements of widest co-operative scope. Nature sets bounds to many of these damaged families by limiting their reproductive powers (it would seem at times insufficiently). But we may have great confidence in nature's methods, especially if we can divine her ultimate intentions. Among those may be the fact that under suitable environment and opportunities a *regeneration* is possible.

During the period of brain growth in bulk up to the seventh year, when the full size and weight is almost attained, nutritive influences are of the largest value. How far this can reach positively needs future demonstration, but is rich in promise; how far negatively is well understood, but receives as yet insufficient support. There is during these early years more formative power and less out-put of energy exhibited. The brain of a babe or infant consumes more oxygen and produces more carbonic acid and urea. The chemic constitution of the muscles is different, and, no doubt, of the naurine of the nervous centres. They are more subject to proliferative diseases, and less to those of disordered function and degeneration.

One, if not the most, important quality of the brain during this formative epoch is deficiency in its resisting power. In this respect it shares with many other organs, but none of them are comparable in importance to the brain. This power to resist hurtful influences from without, or from within, is the very key-note of childish physiology, the index of vital force. The wide variations between functionating power in structures which are (to all our present means of investigation) of practically similar structure are the special realms for promising investigation in the future. Whatever interferes with these delicate buddings of energizing and gatherings of potentiality there leaves its blighting mark for all time.

"The most serious of pathologic fact of brain development is certain mental disturbances in the functions of the brain, and these are intimately associated, hereditarially and functionally, with certain motor, sensory and trophic neuroses incidental to the period of development." (Clouston.) The brain has recently been shown to be the stimulator and inhibitor of all nutrition, the key to all the functions of all the organs and tissues.

The unique fact about the nerve cell is the extreme slowness with which it developes function after its full bulk has been attained. Small differences in amount of blood, in the condition of that tissue, its acidity or alkalinity, its cleanliness or toxicity—the pressure maintained in the cerebral vessels from whatever cause—especially if continued just a little too long and irreparably hurt, may come, or such damage as require much time and perfect condition for repair.

A careful review of our evidence reveals one uniform and all-prevailing error, requiring to be perpetually discounted in these and all other

similar histories, *viz.*, the exact truth about the children is rarely or never told. Sometimes this is due to incompetent willingness, but more often to systematic endeavor to mislead. Very frequently it is impossible to be exact, those testifying being not in possession of the essential facts, or retailing them at second or third hand. Again, in a large proportion of the cases, the parents testifying are themselves mentally incompetent. They are certainly rarely fit to rightly grasp the spirit of the inquiries. Most often the inaccuracies come from deliberate intention (sometimes innocent vanity, oftener *malice prepense*) to make the very best of the family and personal histories. These views are had (spoken privately of course, and with bated breath) from the excellent gentlemen who preside at these institutions and do their utmost to arrive at strict truths. It is also obvious to us when trying to collect testimony, as we have repeatedly found in clinical work in dispensary and private cases.

The one factor common to almost half the cases is alcoholism, forty per cent. conceded by many observers; and how much more can only be conjectured. Next comes other mental defects, many of these again might be referable to alcoholism as a not directly traceable but essential factor.

Krafft Ebbing shows the close relationship of alcoholism and mental disease by the exact analogy in acute alcoholism to the insane states from melancholia to imbecility. It begins with slight maniacal excitation, thoughts flow lucidly, the quiet become loquacious, the modest bold. Muscular action becomes imperative, the emotions become exalted, as shown by laughing, singing and dancing; then follows loss of control over esthetic ideas and moral impulses; the victim becomes cruel, cynical, dangerous; the mind weakens, consciousness grows dim, illusions arise; he stammers, staggers, and becomes a temporary paralytic and afterward a melancholic.

Alcohol, moreover, when misused, habitually injures all organs and tissues, notably the blood, resulting in pathologic states or increased susceptibility to disease; or intensifies any latent feebleness. In short, it breaks down the barriers which a vigorous vitality sets against the unceasing onslaughts of death. It incidently perverts the more delicate aggregations of cells, as in the brain and central nervous system, not only imperilling their integrity, but reducing to a lower level the vital force needed to reproduce offspring of full powers and resistances.

Dr. Hughlings Jackson says that those powers of mind developed last are least stable, and the first to be paralyzed by alcohol. Dr. Kraepelin shows that alcohol prolongs the reaction time needed for discrimination and decision. If such effects as these are recognized to fall upon normal organizations, how much more potent and serious upon those whose stability is already lessened from various causes natural or acquired.

As Darwin points out, all the evils from alcoholism can pass from father to son, becoming worse if the use of this poison is continued, until the result is self-limited in many happy instances by sterility.

The more pronounced effects of heredity are not to be remedied. The morbid effects of parents is maximum when conception takes place during drunkenness of one or both. (Dr. L. Grenier.)

The children of hereditary alcoholics show a tendency to excess in the

same way, and this may be an index of impaired physical resistance in the whole family. Grenier also asserts that delirium is more frequent in the descendents of alcoholics.

Dr. Legrain shows that a slowness of evolution, frequency of relapse, feebleness of mental faculties, and poly-morphism of delirinm characterize the effects of alcohol on the degenerate offspring.

Krafft Ebbing (Psychiatric, 1890) defines insanity from the anatomic point of view as "a diffuse disease of the brain accompanied by nutritive, inflammatory, and degenerative changes." The division between mental and brain disease is one for convenience and much wordy debate, lacking in scientific raison d'etre and yet well worthy of comparison and attention. Psychologic classifications are eminently unsatisfactory, at least when striving to search out causes for pathological changes.* J. Batty Tuke (British Med. Jour., May 30, 1891) remarks (and what he says is nearer right than most), "Insanity is not a disease, but a symptom produced by morbid conditions which may arise primarily in the brain, or secondarily from depraved conditions of the general system." Certain causes produce demonstrable (not always demonstrated) changes of tissue, as inflamation, hyperemias of excitation, traumatisms and adventitious products, toxic agents, senile degenerations, epilepsy, and syphilis. Over excitation of the brain is acknowledged as an inducer of insanity independent of other morbid factors. If the nutrition of the cells is unduly interfered with for a long continued period of time, a series of changes ensues not only in the cells themselves, but also in the vaso-motor and vaso-dilator control systems, which may be temporary or permanent.

The circulatory apparatus is overtaxed to meet the increased demand; but the cells being stimulated beyond the health limit a condition of unstable equilibrium between nutrition and function is reached, and consequently, instead of normal discharge of energy, irregularity of discharge is produced by the prolonged maintenance of over vascularity.

Malnutrition is both a powerful exciting cause and itself competent to irretrievably damage the brain. In this country we are less influenced by the deprivation of food, being better provided in this particular than any other large nation, but the people are more subject to disorders of over-tension from protracted strains on the nerve resistance. We are less given to alcoholism because our food supply is ample and the craving for stimulants by underfed stomachs less general; but owing to the intensity of effort, our habits of fierce competition, there is induced a feverish restlessness and higher cell activities. The brain being the stimulator and anhibitor of all nutrition, as Clouston points out, hence becomes responsible for the functions of all the organs, and as they fail it suffers harm.

Melancholia often occurs in certain anemias and is a transient state in many toxemias, notably the uneliminated by products of katabolism. The action and reaction of the peripheral organs upon the brain is shown in numberless ways, in the therapeutic value of careful nutritive regulation in the insane, which is often alone curative. It is again shown in

*Always excepting those exact studies made by such men as Prof. G. Stanley Hall and the physiologic students of psycology.

the extreme susceptibility of the insane to phthisis, greatly lessened by judicious feeding and attention to digestive and other organs. The asylums now afford far better comforts than are enjoyed by the average person, and this tendency to the tubercle is kept down, but even then is often seen. Moreover, even in these comfortable homes, where food, leisure, wholesome occupation, air, and sunshine is lavishly provided, tubercle shows itself readily and is hard to check. Great improvement is frequently made by the systematic measures known as the rest treatment, in asylums, as well as in private practice, influencing powerfully for good those who with many opportunities yet have failed to secure the forcing of their nutritive processes which is known to be essential and which wise measures sometimes accomplish.

Heredity must be clearly distinguished from inheritance, and should be considered in the light, certainly, of several ages and many years, probably a century or more. It has to do with the transmission of certain tendencies and peculiarities, which are not only the "hall marks" and special complexion of families, localities, communities, but of *races and nations.*

We can at once recognize the potentialities, the result of inbreedings of people of like kind or analogous traits; but to estimate those fairly it is imperative to consider the environment, the religious, national and political lights or influences under which these matured. More than these even (which have largely to do with intellectual processes and the formation of character and characteristics) is the question of physical habits and customs, opportunities, and tastes which very much more influence the physique, and through this the brain structure, where are the more impressionable cells in the body. The quality and condition of the mind is profoundly dependent upon the integrity of the material of which the brain and nerve centres are made and maintained, more so than upon any of the modifying influences of a psychical, moral or transcendental nature. Whatever else may be the distinguishing feature of the mind *nothing can be predicted for good of a faulty structure of the organ of the mind.* Morever, admitting the possibility of a competent brain in a body equipped with an unstable or defective nervous organization, at least, this condition cannot be maintained and must react disastrously upon the mind organ soon or late. Inheritance may then represent the conditions which directly or recognizably influence the child in its mental or physical features. It may include certain tendencies, too, which are possibly independent of heredity, as for instance, tastes, tricks of speech, and manner or appearance, feature and size. These inherited qualities may be few or many in one or another of the same family, as several tall, fair, cheery ones evidencing the normal trend, and also one or two short, dark, gloomy children showing the magnificent uncertainties of prophesy.

Then again, there are the families of robust procreative powers, powerful to reproduce peculiarities in one or another direction, (as in a few Royal families where their accidental conspicuousness enables them to be studied) in whom qualities of mind are recognizably preserved, but much less frequently than qualities of bodily conformation, in shape, size, tastes, and susceptiblity to disease.

The secondary results of these latter are most pronounced and run into formulations, if not laws. Alcohol, when enjoyed more freely, produces recognizable results rather more obviously upon the nervous organization of offspring than upon shape or build. From its use come various degenerations, notably upon unstable nerve cells, which again are exhibited in perversion of mental, but even more upon moral tone, until at times pronounced criminality alternates with insanity or fateity, and these with motor instabilities, as in epilepsy, etc.

Consanguinity of parents does certainly seem to influence offspring disastrously. I have seen this several times where a careful search failed to reveal any other factor capable of large influence. One, a couple, second cousins, of fine physique and ancestry, and of the best habits, bred two geretous idiots, who early died.

Dr. Ratchford has recently considered the causes of neurosos in children, and Dr. W. S. Christopher (Archives Pediatrics, 1894,) elaborates these views more fully and his summary—too long to quote—seems to me most rational and complete.

B. W. Richardson says: "If the inter-marriage of diseases were considered in the same light as the inter-marriage of poverty, hereditary transmission of disease would be at an end in three or four generations."

The truth, to my thinking, about heredity is something like this: whereas in a careful study of remote influences bearing upon the characteristics of an individual we may grant that some allowance must be made for ancestral traits of body and mind, but only so if within three or four generations. Beyond this it is rarely possible to determine. Much more significance may be given to bodily peculiarities, and especially tastes, more particularly evil tastes, which far outweigh in influence wholesome ones. Nothing certain can be made of psychical peculiarities, for in one of the most conspicuous means of demonstrating this, as in matter of religious convictions, these are not reproduced and only feebly impressed when under constant, direct influence and training. The taste for music, art, and literature is rarely more than individual, and almost never transmitted except to the second or third generation, and most of this is through example and opportunity.

On the transmission of physical peculiarities much more may be said. Size, shape, coloring, conformation of feature, hair, are frequently seen to prevail, generally under favorable conditions, for several generations; also tastes for certain forms of life, occupation, and amusement, and above all for narcotics, are liable to continue.

(To be Continued.)

John Hopkins University.—We regret to learn that the John Hopkins University is sorely embarrassed financially by failure of the Baltimore & Ohio Railroad to pay dividends. Friends of the institution are making efforts to raise a subscription of $50,000 annually for five years, in order to tide over the affairs of the university.

OBSERVATIONS ON ANTISEPTIC THERAPY.

BY O. MCCULLOUGH, B.A., M.D., ERIN, ONT.

In the June number of THE CANADA LANCET, there appeared an excellent editorial on the "*Nature of Puerperal Fever.*"

Now, I think the word *nature* is a most apt and well-chosen word, and the best in its list of synonyms, as every one understands its primary meaning, and I infer that it has this signification in the article to which I allude. The expression *puerperal fever* is not so suggestive or definite as we would like, but it is the old familiar term which our conservatism delights to retain. It is the name of an associated symptom or condition in the same sense that *glycosuria* is—a sort of metonymy, by which a certain effect is put for the cause which lies deeper. The uric acid diathesis comprehending apparently a wide class, is attracting much attention now, and the aim of medical science is to proceed by induction, as the logicians would say. General principles and causes are aimed at, while symptoms are only the data or evidence for the investigation of cause. We have passed the Augustan age of etiology, and are now in its Victorian epoch —a brilliant period, and already we hear of twentieth century practice.

Chemistry and the microscope promise much in medicine. Listerism, by which I mean the whole field of antiseptic application, with its consequent approach to aseptic conditions, has made operative surgery a greater success than ever, and if it is not all that its advocates claim, it is cleanliness anyway, and any attempt to displace it would be a step toward the "dark ages" of practice. Let us approach the sanctuary of antisepsis with all reverence.

Whether its concomitant outgrowth, the destruction of one poison by the antagonism of another, will become a part of the medical creed remains to be seen, but it is just possible that the chemistry of nature works in this way. Non-pathogenic organisms may accomplish the destruction of the pathogenic in order that the vital functions may be preserved intact. Physiology is the antagonist of pathology, for nature always resists the invasion of its functions. Both acid and alkaline secretions are essential for the vital processes, and we know clinically the effect on nutrition when there is any substitution or exchange of reaction. Litmus paper has its place in therapy, and the microscopic side is a supplement to the macroscopic. Qualitative analysis is only a part, quantitative completes the whole. Esbachs' method of estimating albumin is a step further than the nitric acid test for its presence. Diagnosis does not stop at symptoms, nor does it reason by analogy, but it recommends that every case be studied on its own merits after those symptoms have been noted. This is the index to successful treatment. It is doubtful whether there is any such thing as a functional disease. Either qualitative or quantitative changes may effect the secretions, and so cause disease. We must have more chemistry in clinics, and all our investigations must be as exact as possible, for the exact sciences demand exact methods. The

blood and urinary secretion must be carefully tested in those obscure cases of cachexia often dependent on imperfect oxidation. The use of the microscope is becoming more general. And over and above all, we must be shrewd observers. The eye, the ear, the sense of touch, and the muscular sense carefully trained, furnish us with a knowledge of the objective in disease, as the subjective part belongs to the patient, and is not the physician's work. Every doctor must endeavor to be as far as possible a physician, surgeon, and accoucheur, full of general knowledge, for a specialist without this general knowledge is in no sense an educated man. In the science and practice of obstetrics as well, this general knowledge must be acquired for success. I have made this apparent digression to impress the fact that we must be students always in order to be doctors. Leaving the last parapraph, and resuming a former one, I would say that the antiseptic system has been carried to excess, not in surgery, but in midwifery. The accoucheurs of the past delivered large families into the world from their uterine incarceration at term, and how many mothers of these large families are still comparatively well, as old age approaches, and all without any antisepsis at childbirth. It is not fashionable to have large families now, and yet we have seen an increase of septicaemia with the decrease of the birth-rate. Is it meddlesome midwifery that introduces a poison from without, or is there some peculiar activity in our modern infective diseases that encourages the existence of blood-poison, even though these diseases are far removed from the streptococcus of septicaemia. Professor Lyman, of Chicago, in declaring that epidemics cannot be controlled by "mere sanitary rules" apart from home sanitation, says that the "suppression of small pox has been followed by increased mortality in scarlatina," and that "the suppression of scarlatina and measles has been followed by increased mortality in typhoid, diphtheria and diarrhœa." If this be true, diseases must change in character and intensity with social condition. Cleanliness is the *sine qua non* of health, and antisepsis is its modern form. In the article alluded to at the outset the learned editor of THE LANCET commends Professor Lusk, that eminent contributor to American obstetrical literature, for his crusade against modern midwifery. Dr. Lusk has made this noble statement worthy of a progressive teacher.

"I reserve to myself the privilege of changing my views to-morrow if it seems to me new observations should make a change necessary." A man cannot remain a conservative in medicine as he can in politics, but he must be of a deliberate turn of mind to preserve himself from continual experiment. Dr. Lusk, in accordance with modern authority, says that the acidity of the vaginal secretion is increased by natural micro-organisms, which antagonize the streptococcus of septicaemia. (I would just add here that the older writers taught that the streptococcus of erysipelas caused septicaemia in the puerperal woman.) This is a part of the protective wall that nature has erected, and is essentially a chemical defence. The other part is a mechanical barrier found in the accumulated mucus of the cervical canal, which is virtually an antiseptic pad. There is no doubt about the truth of this, for even in menstruation the glands of the cervical canal are very active in the secretion of

mucus stimulated by the hyperaemia of the neighboring parts. But mucus is not necessarily anti-toxic, for its excessive presence in chronic cystitis may encourage offensive decomposition. In calculous pyelitis Dr. Moullin, of London, recommends the internal administration of turpentine to dispel the mucus in which the calculi flourish. Mucus can readily accumulate in both acid and alkaline surroundings, and when present in the stomach it interferes with the normal acid secretion of that viscus, but the accidental acids may be present in great excess. So mucus cannot give chemical protection to its immediate surroundings, but is possibly more than a lubricant at any rate. Dr. Lusk goes on to say in a graphic manner that the amniotic fluid, child and placenta, all going in the direction of gravity, complete the toilet of the passages. He therefore makes war on the douche, which he claims dissolves the mucus, and weakens the resisting power of the tissues. He regards partuition as a normal act, a physiological expulsion, and therefore self-sufficient.

All this is excellent doctrine *pro tanto*. But there are cases in our modern society where nature is not adequate to the task imposed upon it. There are in the obstetric domain accidents which the most careful patient and physician cannot avoid. There are mal-positions and post-partum hemorrhages, not the rule it is true, but the exception in the practice of every lifetime. There are mal-formations of the hard and soft parts—the misfortunes of women whose nutrition has suffered, not only in development, but in growth. There are those predispositions in the mother or child to cause abortion—a perversion of the natural processes. There are certain tendencies and accidents which beset the female from her advent into this world to her exit from it. In fact we might enumerate a long list where unaided nature would fail in expulsive power at the time of child-birth. All these cases need assistance, and the most careful antisepsis, if not on the patient's side, at least on the accoucheur's, and possibly both.

Dr. Lusk says, the physician very frequently carries the infection to the lying-in woman, and probably this is true. It therefore shows the necessity of a previous baptismal antisepsis on his part. He justly censures the curette responsible, as it is, for many a lesion and many a graver accident, and if these are escaped, indeed, it prepares a field for emigrant germs.

(*To be continued.*)

Alcohol Habit.—Dr. Machette, in the *Med. World*, claims to have but two per cent. of failures in his treatment of the alcohol habit. He gives his patients a hot bath and a cathartic, then a hypodermic injection of hydrastine, beginning with one-fiftieth of a grain and gradually increasing until one twentieth of a grain is given four times a day. Valerian and bromide are given for nervousness.

SURGERY.

IN CHARGE OF

GEO. A. BINGHAM, M.B.,

Surgeon Out-door Department Toronto General Hospital; Surgeon to the Hospital for Sick Children. 68 Isabella Street.

SURGICAL TREATMENT OF INTRACRANIAL TUMORS.

Prof. W. W. Keen contributes a paper with this title to the *International Medical Magazine*, of March, which is replete with valuable suggestions. With reference to method of opening the skull proposed by Doyen—to make an osteoplastic flap of the entire side of the skull—he states that while it will greatly simplify the treatment of tumors, it is doubtful whether so extensive a temporary resection will stand the test of time. The mode of access to the tumor, if Doyen's method is not followed, is either by the ordinary method of trephining, using not less than an inch and a half trephine, and making either a single or multiple trephine openings, which may be later connected by sawing or gnawing away the intervening bridges of bone, or by various methods for making the usual temporary osteoplastic resection.

The skull being opened, we may follow one of two courses. First, especially if the tumor is small, we may proceed with its extirpation and the closure of the wound, or secondly (and this is especially applicable to tumors of large size), the first part of the operation may be terminated so soon as the brain is exposed and the hemorrhage checked. The wound is then temporarily closed, and the remainder of the operation is completed after the lapse of from three to six days. In large tumors, the author advises that the operation should be divided into two stages. Hemorrhage and shock, the two principal dangers in connection with the removal of cerebral tumors, are thus minimized. It has, however, the disadvantage of a possible infection.

The control of hemorrhage is one of the most difficult problems in connection with the removal of cerebral tumors. Hemorrhage from the diploë is easily controlled by Horsley's antiseptic wax. For hemorrhage from the vessels of the meninges the ligature is an efficient means of control. If the dura be cut and an artery bleeds, the cut end can be tied just as any other vessel. If it be necessary to ligate the vessel in its continuity in a dura unopened, though with torn vessels, it can be secured by passing a fine silk thread by means of the finest semicircular Hagedorn needle under the dura and around the vessel, care being taken not to wound the underlying cerebral veins themselves. For venous hemorrhage, the best method, also, is the ligature. Rarely can the vessel be seized by the forceps and a ligature applied. The best method again is by the semicircular needle of suitable size, to pass a silk or catgut liga-

ture through the cerebral tissue immediately below and around the vein, and then to tie the vessel by drawing with equal force on the two ends, not constricting the vessel with so much force in tying the knot as to tear through its weak walls.

Sometimes packing and hot water (not over 110° F.) will aid greatly in arresting any copious oozing. If the sinuses are torn or opened, the hemostatic forceps may be used to grasp the opening, if it is small, or, as done by Dr. Keen in one case, by three pairs of hemostatic forceps placed alongside of each other, the opening can be closed. The forceps may then be allowed to remain *in situ*, and may be safely removed in three days. Should this method not be available, then the sinus should be plugged with iodoform gauze, the end of which protrudes through the scalp wound, and can be safely removed again after three days.

Any of the superficial sinuses of the brain can be exposed with almost perfect safety by gnawing away the bone over them after having separated the sinus gently from the skull by Horsley's dural separator or a probe. The point where the parietal veins enter the superior longitudinal sinus should be avoided, if possible, as these are large vessels, and a great amount of blood may be quickly lost. Hemorrhage from the sinuses, however, can be controlled again by packing, if not by the hemostatic forceps, or possibly by fine suture.

In separating the dura from the brain, great care must be taken as we approach the superior longitudinal sinus. The veins of the brain widen into venous bays (the parasinoidal spaces), from which the hemorrhage will be often more profuse and alarming than from the sinus itself. The loss of blood from the cerebral veins is certainly more dangerous than the loss of an identical amount from other veins of the general system. Hence, when the finger gently introduced under the dura in the neighborhood of the superior longitudinal sinus perceives any attachment of the dura to the brain, we should be most careful to desist from any further separation of the parts, lest by doing so these large veins be torn and a parasinoidal space opened. On no consideration should this be done until the bone has been first widely gnawed away over the point of the adhesion to give ample room instantly to deal with possible hemorrhage.

Not uncommonly we can avoid a great deal of hemorrhage from the cerebral tissue by lifting the pia from the underlying convolutions so as to avoid the veins by working under them. The pia can be drawn out of the deep sulci in this manner with relative ease. Great care must, of course, be used in manipulations under such a displaced pia.

The tumor, when discovered, may be removed either by the finger if it be well encapsulated, or, if not, then by the knife, which should be held vertical to the surface, so as to injure the adjacent cortex as little as possible. At the same time, we must remember, especially in cases of sarcoma or its allies, that the infiltration of the cerebral tissue extends some distance beyond the tumor proper. Therefore, some of the apparently healthy brain tissue must be sacrificed for the purpose of safety. This may induce paralysis of important centres, but no such calamity can compare with the certainty of a return, and, therefore, of a future fatal

issue by a less thorough removal. Not uncommonly the scoop or curette may answer for the purpose of removing any remaining portions of the tumor after the main part has been removed.

Even in cases in which the tumor is too large to be removed with safety, a partial removal often gives very great relief, especially to the intolerable headache and other similar distressing symptons, and this partial removal may be attempted not only once, but, as the author has done it in one case, three times, and each time with great relief.

Should it be impossible to remove any of the tumor, the mere removal of the bone over the tumor will often give very great relief.

Sometimes the dura is involved in the tumor, and must therefore be sacrificed. The danger of fungus cerebri is relatively small when the dura is closed after being opened, and especially if the brain substance itself has not been interfered with. In such cases, as Dr. Keen suggested a few years ago, the dura may be replaced by a bit of the pericranium. A piece of this, a little larger than is sufficient to make good the lost piece of dura, is cut entirely loose from the under surface of the flap of scalp, and is sewed in place by a few interrupted sutures. In doing so, while not sure that it is needful, he has always, on theoretical grounds, however, turned the pericranium upside down, so that the osteogenetic surface should be external. If, then, any bone is developed from this osteogenetic surface, it grows away from the brain instead of into it.

Excepting cases of abscess, gunshot wounds, intracranial hemorrhage, and cysts, it is the author's rule at present not to drain. Occasionally, on account of hemorrhage, it will be necessary to leave some iodoform gauze protruding from the wound, and this acts as a drain. In such cases, however, he always inserts a stich in the scalp at the time of operation, so that as soon as the gauze is removed, the wound may be entirely closed, or, should there be any need for drainage for twenty-four or forty-eight hours after removal of the gauze, he inserts a small bit of gauze to keep open only the skin wound, and the stitch is tied as soon as the need has passed. If no drain be employed, very frequently by the second or third day the flap will bulge considerably by reason of the accumulation of wound fluids under the scalp. If this is the case, and all the more if it is attended with headache or other pressure symptoms, he either inserts a pair of forceps between two of the sutures, and thus give exit to the wound fluids, or sometimes cut a stitch for the purpose of gaining sufficient room for the evacuation of the fluid.

A month or more after the patient has entirely recovered from the operation, the question of closing the opening in the skull will naturally arise. Until this closure is effected (and sometimes it is best never to close it) he always directs the patient to wear a skull-cap, on the inside of which is sewn a bit of tin a little larger than the opening, the sewing being made possible by first covering the tin with some silk.

Sometimes the opening in the skull can be closed immediately, and this is best done by replacing the bone in bulk. In about fifteen cases, Dr. Keen replaced a button of bone an inch and a half in diameter and the entire thickness of the skull, and in not a single case has the button ost its vitality. If this is to be done, however, the button of bone must

be very carefully kept warm and moist, by placing it in a cup in a 1 :2000 bichloride or some similar solution, and placing this cup in a basin of water with a thermometer, so that the water shall be kept from 105° to 100° F.

For this König has adopted a very ingenious method. At any late time after the opening has been made, by accident or by a surgical operation, he has dissected away the scar over the opening, and has then outlined an adjacent flap of the shape and somewhat larger in size than the original opening to permit of shrinkage. The flap is not separated from the skull, but under it he chiselled away the outer table in fragments, these fragments being left adherent to the under surface of the flap. By sliding the flap into place so as to cover the opening, he has in that manner closed some very large gaps. The place left bare by the transplanted flap is then covered in by skin-grafting by Thiersch's method.

Dr. Keen has modified this method in the case of a young man suffering from severe epileptic attacks in consequence of a compound fracture of the skull. In November, 1890, he exposed the opening in the skull, removed a considerable amount of cystic connective tissue lying over the brain, and endeavored to close the opening by transplanting a bit of bone from the skull of a lamb. The operation failed, however, since the lamb's bone underwent partial absorption, and finally the necrosed fragment had to be removed. Great improvement followed in the epilepsy, but lately the attacks became more frequent, and in January, 1896, the author reopened the wound and removed a considerable amount of loose spongy scar tissue. To close the opening in the skull he chiselled away the adjacent outer table of the skull by means of a gouge and hammer. These fragments were then scattered over the surface of the brain (or rather upon the spongy scar tissue which filled up the entire opening), so thickly as to leave no space between any two. Three weeks later these fragments had become quite solidified, and there is every reason to believe that they will fill the opening in the skull by fusing into a true bony tissue.

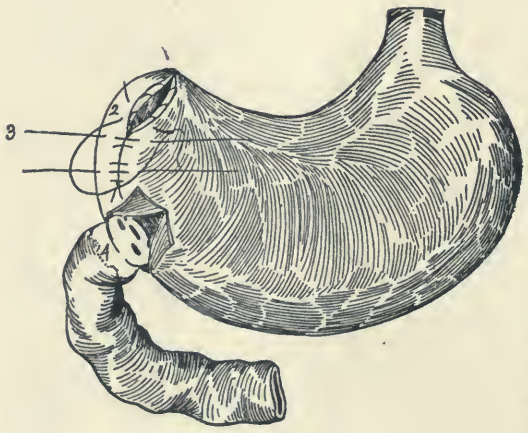
One advantage of this method over König's, of an osteoplastic flap, is that one can obtain as much bone as is needed from the adjacent portions of the skull, and at the same time not produce puckering of the scalp from displacing the flap on its pedicle. Another is that it does away with the necessity of skin-grafting. Dr. Keen regards either of these methods as superior to Senn's decalcified ox-bone, or the use of celluloid plates or other foreign bodies.

PYLORECTOMY IN AMERICA.

Dr. Alex. Hugh Ferguson, of Chicago, reported a case of carcinoma of the pylorus upon which he had successfully operated. He recommended pylorectomy for carcinoma of the pylorus for the following reasons: (1) Medical treatment offers a mortality of one hundred per cent. within twelve or eighteen months. (2) Pylorectomy promises a possible

cure. In nineteen per cent. of over nine hundred cases dying with cancer of the pylorus no adhesions whatever were found after death; starvation took place before the carcinoma had reached the peritoneum. There would be good prospects of curing most of these. Recovery follows the operation in about fifty per cent. of the cases. By timely interference many cases can be saved that now go on to secondary infection and are doomed.

After opening the abdomen, Dr. Ferguson recommends the performance of pylorectomy thus:



(FIG. 1).

1. Continuous Suture in proximal cut end of stomach.
2. Coapting Continuous Suture inverting mucous membrane.
3. Interrupted Suture of Silk.
4. The Anastomosis Button.

1. Liberate the duodenum from the pylorus, unite its distal cut end to the posterior surface of the stomach with Murphy's button, invert the proximal cut end toward the pylorus, and close with sutures. The great advantage of completing the gastro-duodenostomy first is that the operation can be safely stopped at this stage should the patient show signs of weakening, the abdomen be at once closed, and the removal of the pylorus be left for a second operation.

2. Separate the stomach from the pylorus and close it rapidly with sutures. Should the patient now present alarming symptoms, the surgeon should again cease operating and leave the pylorus *in situ* in the mean time. It would, of course, be necessary to fasten it in the abdominal wound and drain it externally, which would only facilitate its extirpation at another time.

3. Remove the cancerous pylorus. Spend no time in trying to use interlocking ligatures, but apply forceps after forceps and cut the mass away. This done, the application of ligatures can be effected more expeditiously.

TUBERCULAR PERITONITIS.

Dr. Robert Abbe, New York, thought it gave a fairer understanding of the multiform appearances of the disease if viewed from the standpoint of the bacillus, rather than from the gross appearance, which has led to the division into the ascitic, the dry and the caseating forms. A sudden tubercular irruption into the peritoneal cavity may be as acute in symptoms and durations as acute peritonitis from other causes. A

slower outbreak may result in ascitic distension in three or four weeks, and a less virulent bacillus action may occupy months in inducing ascites and wasting. In other cases, possibly due to the route of invasion (penetration through lymphatics, communicating mucous and peritoneal serous coats, or by follicular ulcers, allowing tuberculous milk to be the medium of infection), a dry or adhesive form follows, in which hectic and rapid wasting result. Again, the bacillus produces an outpouring of thick lymph and flocculent serum, which rapidly becomes purulent, producing unsymmetrical cakes of thickened omentum, matted coils of intestine and encapsulated purulent collections. The bacillus products rapidly caseate and ulcerating fistulæ may result. All phases of the disease may be regarded as representing the life history of the bacillus and its products.

Tubercular peritonitis may be, and in the early stages often is, the only site of tubercle deposit in the patient. Hence, if overcome here, a practical cure often follows. Even when other phases of infection (pleural, intestinal, bronchial) are seen, an operative cure of the peritonitis has often been followed by general recovery. The mode of entrance of the bacillus is directly through the intestinal wall, or through ulcerating appendicitic, or tubal or ovarian tuberculosis, or through the blood. The claims of a few recent authors to have cured tubercular peritonitis by medical treatment were reviewed and credited.

The unquestioned cure of true tuberculosis peritonitis by laparotomy was proved by two classes of cases: those who have long survived operation, and those who, having come to autopsy long afterwards, have been found free from tubercles that studded the peritoneum at the time of operation. Experimental proof in animals corroborates also. Simple laparotomy and evacuation of the ascites, closing the abdomen dry, is credited with a large number of cures. Irrigation with warm salt solution is to be preferred. Camphor-naphthol application, as used by Rendu, is advised for bad cases.

In speaking of direct medication, the theories advanced to account for the surprising cures were carefully considered, and, in conclusion, it was said that, "the theory that is sustained by most facts is that based on the life history of the bacillus and the capacity of the animal economy, not only to suppress the activity of the organism by encapsulating it, but to remove it by absorption. The proper opportunity for conquests is not afforded in the presence of ascitic fluid, which acts as a veritable culture bouillon, and by its fluidily aids dissemination. When, however, the peritoneum has been aroused by congestion, which follows evacuation, and a reactionary inflammation is set up, engendering cell hyperplasia, the intruder is walled in, and retrograde degeneration sets in.—*Med. and Surg. Reporter.*

THE TREATMENT OF CANCER OF THE RECTUM.

Dr. Lewis H. Adler, Jr., of Philadelphia, stated that the four recognized operations for cancer of the rectum were, extirpation, colotomy, posterior linear proctotomy and curettage. He called particular atten-

tion to the value of curettage in those cases of cancer in which the disease is within the lower three inches of the rectum, and its character of such nature as to allow of its more or less complete removal by the curette. In certain cases the combined operations of colotomy and curettage afford the patient more relief than where one or the other procedure is adopted singly. Under any plan of treatment in the majority of cases only temporary relief can be obtained. The indications for the operative treatment of rectal cancer may be summarized as follows:—Extirpation is to be considered only in those cases in which the disease admits of the the hope of obtaining a permanent cure; colotomy, when the rectum is involved above the lower three inches of the bowel, and the disease has produced an appreciable obstruction; curettage or posterior linear proctotomy, or the two combined, may be employed in those cases in which the disease occupies the lower three inches of the rectum.—*Med. and Surg. Reporter.*

THE TREATMENT OF BURNS.

The *Lancet* for February 22nd contains a report of a recent meeting of the Leeds and West Riding Medico-chirurgical Society, at which Mr. W. H. Brown read a paper on this subject. At the present day, he said, the treatment of burns was unsatisfactory. The death-rate from burns of all degrees in the Leeds General Infirmary was identical with that of twenty years ago.

The causes of death were shock and septicæmia, and the author recommended morphine to allay the former and to allow the parts to be carefully cleansed and dressed. To keep the patient warm, and to protect the burns from the air, he advocated the continuous use of a warm bath rendered antiseptic with boric acid. He thought that carbolic acid and mercury were too easily absorbed to be used. To lessen or to prevent septicæmia, he suggested that, where it was possible, after the administration of ether, the surgeon should cut or scrape away the tissues that appeared to be destroyed beyond a chance of recovery, and then apply an ordinary surgical dressing. At present, Mr. Brown said, he used eucalyptus oil, which was not toxic or irritating.

Mr. J. W. Teale stated that he had used chloroform when he applied the dressings, and thought that it decidedly lessened shock.

Mr. Prigdin Teale thought that carbolic acid combined with the sloughs and formed a kind of protecting covering which would be comparatively harmless.

Dr. Chadwick and Dr. J. B. Hall were strongly in favor of the method employed in Vienna, that of using continuous warm baths throughout the treatment.—*Med. and Surg. Reporter.*

Umbilical Hernia in Infants.—Dr. Cahier has studied this subject and reaches the following conclusions: 1. In the children of either the rich or poor the radical cure of umbilical hernia must be tried up to the age of eighteen months or two years, unless there be certain exceptional

contraindications. 2. In these young patients the use of the conical pad and the elastic spring are to be avoided. A hemispherical hard-rubber pad supported on a metal plate and held in place by a bandage is the best appliance. The apparatus should be changed every eight or ten days. 3. In children two to seven years of age belonging to well-to-do families, who are carefully looked after, an attempt may still be made to cure the hernia by bandage. 4. Children of the same age, whose parents are poor and consequently unable to give the necessary care to the child, or if they are negligent or ignorant, should not be subjected to this treatment if there is any tendency for the hernia to increase or to give trouble. 5. The umbilical hernias which persist after the seventh year, in spite of the careful use of the bandage, may be treated by other measures. The author favors surgical interference under the following circumstances: 1. Umbilical hernias of the newborn if strangulation occurs or if persistent gastro-intestinal troubles are induced which seem to be dependent upon the hernia. 2. The hernias in children of from two to seven years present analogus indications. 3. Children of this age belonging to poor families, who do not receive proper attention, if at the end of a year or eighteen months the hernia is still of the same size. 4. Hernias that persist after the seventh year, that are rebellious to treatment, and tend to increase in size. 5. If the skin covering the hernia is inflamed or ulcerated. 6. If the hernia interferes with the occupation that the person has selected. 7. Umbilical hernias with a large ring. 8. Those that are subject to strangulation or inflammatory accidents. 9. Those that cause pain and gastro-intestinal disorders, and consequently interfere with the development of the child.—*Revue de Chirurgie.*

Modification of Chopart's Amputation.—This winter, at St. Joseph's Hospital, Dr. Senn introduced a novel and important modification of Chopart's amputation of the foot. It is well known that after this operation the *tendo Achilles* often contracts and throws the end of the stump forward, so that the patient walks on the corner of the stump instead of the plantar surface. At best there can be no voluntary flexion or extension, and no elasticity to the step. To obviate this Dr. Senn dissected out the flexor and extensor tendons and brought them together over the stump, lapping them so as to give ample room for stitching them together. The patient, a young man, made an excellent recovery, with the most beautiful results. The tendons united so that perfect flexion and extension was secured. This result will certainly give the person a much more natural and elastic step in walking. This is the first instance on record where the tendons were united over the end of the stump in Chopart's operation, and it reflects credit upon the skill and ingenuity of Dr. Senn.—*Medical Sentinel.*

Aphthous Stomatitis:—

℞. Sodii Salicylatis ..... ℥iss.
Aquæ Rosæ ..... ℥i.
M.S. Apply several times a day.

MEDICINE.

IN CHARGE OF

N. A. POWELL, M.D.,

Professor of Medical Jurisprudence, Trinity Medical College ;
Surgeon Out-door Department Toronto General Hospital ; Professor of Principles and Practice of Surgery, Ontario Medical College for Women. 167 College St.

CARDIAC THERAPY.

BY D. C. HAWLEY, A.B., M.D., BURLINGTON, VT.

I venture the statement that there is no department of therapeutics in which knowledge is so exact as in that relating to cardiac disease. Our knowledge of the action of the heart in normal as well as in pathologic conditions, ought to tell us why and under what circumstances a given remedy may be useful, provided we know its physiologic effects. The principal remedies which directly affect the heart and blood vessels are digitalis, strophanthus, strychnia, spartein, convallaria, caffein, glonoin, acnoite, veratrum viride, opium, bromids and ergot. Let us briefly review the physiologic action of some of these remedies, when administered in medicinal doses.

Digitalis stimulates the motor ganglia of the heart, increasing the force of the ventricular contractions. By stimulating the inhibitory fibres of the pneumo-gastric, it lengthens diastole, thereby giving time for the cavities to receive more blood. It also acts upon the vaso-motor ganglia in the medulla, causing contraction of the arterioles and thereby increasing arterial tension. It is a vascular stimulant raising arterial pressure, and steadying the heart by lulling it into long diastoles. Is digitalis a cardiac tonic as well as stimulant? It certainly increases the nutrition of the heart muscle by supplying it liberally with blood. The coronary arteries fill during diastole and when the heart is acting powerfully and steadily under the influence of digitalis, the increased volume of blood swells the aorta, which, in turn by a mighty recoil, fills the coronary arteries and carries food to every part of the heart.

Strychnia stimulates the vaso-motor centres, constringing the capillaries and causing an increase of arterial tension. It also stimulates the vagus, inhibiting cardiac contractions. Thus we see it has a double action in slowing the heart.

Cocaine effects the vaso-motor centres and the cadio-motor ganglia, increasing arterial tension and the force of the heart's action.

The action of belladona is to increase the force and the frequency of the heart's action by stimulating the cardiac ganglia and by paralizing inhibition. It also raises the blood pressure through capillary contraction, due to vaso-motor stimulation.

Ergot, by stimulating the vaso-motor ganglia, decreases the calibre of the arteroles and produces a marked increase in arterial tension, thereby causing the heart's action to become slower. It also acts on the unstriped muscular fibers in the arterioles, aiding their contraction. All the remedies thus far considered, viz., digitalis, strychnia, cocaine, belladona and ergot may be classed as vaso-constrictors.

Aconite, by lowering the action of the cardio-motor ganglia, lessens the force of the systolic contractions and by stimulating the vagus, lengthens the interval between the beats. It also dilates the peripheral vessels, probably through vaso-motor depression, thereby lowering blood pressure and slowing the heart.

Veratrum viride depresses the vaso-motor conters, dilating the vessels and reducing vascular tension. By a direct effect upon the heart and its contained ganglia it lessens the force and frequency of its pulsations.

Glonoin increases the energy and rate of the heart's contractions and lowers vascular tension by widening the blood paths. The former is done by directly stimulating the heart, the latter by its action on the muscular coats of the arterioles, and not by depression of the vaso-motor centres. Aconite, veratum and glonoin may then be classed together as vaso-dilators, but with this difference in their action, while aconite and veraeum depress the heart's action, glonoin increases it.

Strophantus slows the heart's action, lengthens diastole and increases the force of the muscular contractions, thereby raising arterial pressure, but does not affect the calibre of the vessels through the vaso-motors.

Convallaria, by direct action on the heart, lessens the frequency and increases the force of systole, thus raising arterial pressure. It does not affect the vaso-motors of the pneumogastric.

Caffein stimulates directly the heart, increasing its contractions in force and frequency. It causes dilitation of the arterioles, not by vaso-motor depression, but by an action upon the intra-vascular nerve ends (Semmola.) Large doses affect the vagus, decreasing the number of systolic contractions.

Cactus shortens and increases the energy of systole, raises arterial pressure and shortens the intervals between the beats. Under its use the pulse becomes quicker and stronger.

Spartein primarily increases the pulse rate, and the force of the heart. This increase of the heart's action is soon followed by a decrease of the same. The augmented rate is due to an action of the drug on the heart's muscle or its ganglia, and the decrease to stimulation of the cardio-inhibitory centres. Spartein increases the blood pressure by its action on the heart and by stimulating the central vaso-motor system, and subsequently decreases it by a depressing effect through the same channels.

Thus we see that strophanthus, convallaria and cactus have no appreciable effect on the calibre of the vessels, while the effect of caffein and spartein in this direction is less marked than is that of the drugs we have classed as vaso-constrictors. The effect of opium is to stimulate inhibition, producing a slow and full pulse with increased arterial pressure. Systole and diastole are both lengthened. Bromids lessen the force and frequency of the pulse, as well as arterial tension. It is claimed by

Hammond that bromids produce contraction of the arterioles of the brain, thereby causing cerebral anemia. In the study of cardiac therapeutics it is well to bear in mind that the heart is a double pump with normal valvular insufficiency on the right side and with perfectly closing valves on the left side; that the principal resistance to the flow of blood is in the arteries and arterioles, and not in the veins; that the capacity of the veins is double that of the arteries, and that the abdominal vessels when dilated are capable of holding all the blood in the body. By the use of the vaso-constrictors we increase arterial tension, and as a result send an increased quantity of blood through the coronary arteries, thus improving the nutrition of the heart muscle. In a dilated heart without compensatory hypertrophy, we may by increasing peripheral resistance and keeping it just within the power of cardiac contractions, bring about hypertrophy of the left ventricle, and thus restore the circulation to a nearly normal condition. This has been proved by Oertel. The effect of the vaso-constrictors may be carried too far, and so narrow the arterioles, as to send the blood so rapidly through the capillaries as to cut off nutrition from the heart. The administration of nitroglycerin, which has the power of dilating the capillaries, will, however, remedy this over-contraction. The vaso-constrictors increase peripheral resistance and lower the rate of the heart's action. The vaso-dilators, on the other hand, decrease peripheral resistance and lower the rate and the power of cardiac contractions.

Now the question arises, what working conclusions are to be drawn from these considerations? Let us try for a moment to apply the above data to some of the conditions which we daily meet. In mitral stenosis we have at the mitral orifice an obstruction to the free flow of the current of blood from the auricle to the ventricle. The orifice being narrowed, the auricle cannot pump the normal quantity of blood through it, in the time alloted, and in the attempt so to do, the heart works at an increased rate. Dilatation of the auricle follows, and there is a stasis of blood on the venous side of the heart while the vascular tension is lowered on the arterial side. What must be done to help that heart? We must increase the power of the ventricular contraction in order to overcome the effect of the dilatation, at the same time that we lengthen diastole, to give the auricle time to empty itself. We must also increase the blood pressure in the arteries for the benefit of the coronary circulation, and must work the blood over from the venous to the arterial circulation. If our findings in the physiologie actions of drugs are correct, here is a field for the use of either digitalis, strychnia, strophanthus, spartein, convallaria, or ergot, or a combination of two or more of them. In regurgitation at the mitral valves, we have the conditions above noted, with the addition of eccentric hypertrophy of the ventricle. Such a heart may be in great distress, putting in thirty to fifty extra beats per minute, with the veins full and the arteries empty. Systole is weak and diastole too short for the ventricle to fill with blood. The indications are plain; shorten and strengthen systole and lengthen diastole. To do this we must turn to the same remedies mentioned in speaking of mitral stenosis. Here is an opportunity to use the full phosiologic effect of digitalis. Having

secured that effect, having restored the equilibrium of the circulation, it is probably better to combine glonoin with the digitalis, in order to cut out the vaso-constrictor effect of the latter. In some cases a combination of ergot, for its vaso-motor effect, with spartein or strophanthus, will accomplish all that is desired. The other drugs mentioned in connection with these lesions are valuable and play an important rôle in cardiac theraphy, but having pointed out the general indications for their use, we will not attempt to do more at the present time. In aortic stenosis, so long as hypertrophy keeps pace with the obstruction and with the ventricular dilatation, all goes well. But when the compensation is broken, when the obstruction or the dilatation, or both, get ahead of the hypertrophy, then the ventricle is unable to send the full charge of blood through tho narrowed aortic opening. At each contraction of the ventricle some blood is left within its cavity, and the blood flowing in from the auricle as usual, causes a surcharge of blood within the ventricle. This condition makes it impossible for the auricle to fully empty itself and here again we have dilatation resulting. Nature at once attempts to compensate by starting a hypertrophy of the left auricle; but this only adds fuel to the flame, for the increased power of the auricular muscle sends more blood into the crippled ventricle, which is already distended to such an extent as to destroy the compensatory balance. The effect upon the circulation is decreased arterial tension, and engorgement of the pulmonary and venous circulation. Now what are the indications? Plainly, to strengthen systole, shorten diastole and increase arterial tension. We certainly must not look to digitalis and its congeners to meet these indications. Cactus, caffein and cocain, from their physiologic effects may be expected to do much for us, and experience has proven their value in aortic stenosis. In aortic regurgitation we have eccentric hypertrophy of the left ventricle from a reversed current of blood from the aorta. Regurgitation becomes rapid and prevents the perfect filling of coronary arteries. The hypertrophy so increases blood pressure as to produce endarteritis and finally atheroma. Thus the heart muscle becomes impoverished and dilatation without compensation results. Regurgitation through the aortic orifices takes place during diastole. If we can shorten diastole and strengthen systole we are certainly doing something toward restoring the circulatory equilibrium. Again our physiologic findings point to cactus, caffein and cocain. We have it on so good authority as that of Dr. Reynold W. Wilcox, of New York, that cactus has proved itself, clinically, to be the remedy, par excellence, in aortic regurgitation. Lesions of the right heart being rare we will pass over their consideration. In cases where there is increased peripheral resistance as in pneumonia in the first stage, chronic disease of kidneys, etc., we find a special field for the use of the vaso-dilators, viz., aconite, veratrum and nitro-glycerin. In the first stage of pneumonia we have engorgement of the blood vessels of the lung, with increased action of the heart. If we give veratrum, we bring down the heart's action and dilate the blood-vessels throughout the body. We take the blood away from the lung, and we practically bleed the patient into his own vessels. I am well aware of the important rôle played by

hygenic, dietic and mechanical agents in cardiac therapy. However, a consideration of these in detail is entirely without the scope of this paper, in which I have endeavored to call attention to the scientific use of some of those agents, which, strictly speaking, must be set down as secondary to a proper regulation of rest, diet and regimen, in the treatment of cardiac disease.—*Jour. Am. Med. Asso.*

CHOLERA INFANTUM.

A complaint peculiar to infantile life, too well known to need further description. I have been requested to give my treatment for this scourge of the nursery. I will not stop to give its pathology or morbid anatomy. What the profession needs is the simplest and mildest treatment that will relieve the little sufferers in the shortest time; one of which, at least, I hope to give.

The first five years I practiced, I treated these cases as I learned to from the books and lectures. When my little patients died I wondered why they did not get well, for I knew my treatment was orthodox. When a poor, little emaciated one lingered through the summer into autumn, and finally got well, I know it was despite both disease and treatment.

Among my patients was our own little Ruby, a bright, sweet darling of fourteen months, stricken July 2nd. I exhausted the remedies laid down in the books and those in my memoranda taken down at college, then called to my assistance the ablest physicians available. They said I had done all they could do, and offered nothing new. One, a diplomat, said, he had obtained the best results, in such cases, from the use of Mrs. Winslow's Soothing Syrup, advised me to try it, and went away. In my despair, I cried out, "Is this all?" Is this the end of all hope of assistance, in this hour of my great distress.

July 28th she ceased to be. We laid her away, and might well have written on her little monument, whose spire points heavenward, "Died early, because they knew not what to do."

Then I began to inquire of every doctor I met: What is your treatment for cholera infantum or summer complaint in children? They replied: Opium, morphine, laudanum, paregoric, Doveri, cinnamon, cloves, allspice, nutmeg, kino, blackberry-root tea, white oak bark, raspberry leaf—the whole catalogue of astringents—made into some form of powder, decoction or syrup. The same old, old treatment that has sent, and is still sending, multiplied thousands of lovely, innocent children to premature graves, that ought to be saved; and many of them would get well if they never saw a doctor, or rather, if a doctor never saw them. Hard words to say! but I have been over the battle-grounds; I have witnessed the last struggles; I have heard the weeping of mothers and friends, who anxiously watched for the last breath.

I have paid dearly for my knowledge. I am still in a position to look over the field, read the results, and know whereof I speak. I had tested

the treatment laid down in the standard works, and those given me by my teachers, and found them disastrous failures. I had applied to professional gentlemen with whom I met, and some of them appeared to think they had about reached the top round, and, from them, learned nothing new under the sun. I was then, comparatively, a young man. I determined to pull out of the rut made by that old professional cart, that went out from Philadelphia over one hundred years ago, and, if possible, blaze a way to the goal of my ambition, to relieve and save these little sufferers.

Under astringents, I found the inner coating of the stomach wrinkled and hard, like that of chicken's gizzard; the small intestines the same, with occasional short spaces distended with gas. No digestion, absorption or assimilation could take place under such conditions. (If you will cut down here after death, gentlemen, you will find, after using your puckering treatment, a similar condition.)

I began to think for myself: There is evidence of irritation here, manifest at both ends of the line. First, by the vomiting, and second, the diarrhœa. What then are the indications?

The answer is plain. First, control the irritation, and second, remove the cause. To control vomiting, one-eighth grain tablet of calomel every hour until four are taken. Follow with teaspoonful doses of castor oil, or pure olive oil, in which is mixed three to five drops of Battle & Co.'s Bromidia, every two hours, until it operates on bowels, and be sure that it *does operate, too.*

Then give every two or three hours from half to a teaspoonful, according to age and emergency, of the following:

℞.—Aquæ calcis, ... 1 ounce.
Mistura cretæ, ... 1 ounce.
Syrup acaciæ, ... 1 ounce.
Bromida, ... ½ ounce.
Bismuth sub nit., . . . 1½ drachms—M.
Sig.—Shake well before using.

Repeat the oil every morning *till it operates,* and follow it as before. If the Bromida in this formula is not sufficient to secure quiet and sleep, I give enough of it in addition till it does, always properly diluted. In extreme bad cases, with "brain symptoms," I depend entirely on Bromida, and it has never failed me. I have given it in half teaspoonful doses every hour till the desired effect, with no unpleasant results.

Observe proper rules of feeding and bathing and the little patient is usually all right in a few days. Since I have adopted and followed this course, now about twenty-five years, I have not lost a case of cholera infantum or summer diarrhœa, and my records will show that I have treated, probably, as many as any one in the same section of country.

I want to say here, that I have saved the lives of more children, of all ages, with Bromidia, than any other remedy I have ever used, and I have used it ever since it was first introduced. I would no more think of going among the little ones without a bottle of it than I would of going among the "Haw-eaters" of the Missouri Valley, without a bottle of

quinine. I know how many feel from what they write about so-called proprietary remedies, but "what I have written, I have written." "The proof of the pudding is in chewing the string;" chew the string, gentlemen, and then tell us what you know.

When doctors learn that medicines never cure any disease, but may only remove the cause, that the symptom may restore itself, then there will be a great revolution in our medical armamentarium, and the manner of using, to obtain the desired result.—J. M. Duncan, M.D., in *Med. Brief.*

Albuminuria Casts and Bright's Disease.—Shattuck (*Boston Med. and Surg. Jour.*), has examined the urine of patients seeking his advice for various ailments. He has used boiling with additions of nitric acid and the Heller test, and considers them the most satisfactory.

He concludes his article as follows:—

(1) Renal albuminuria, as proved by the presence of both albumin and casts, is much more common in adults quite apart from Bright's disease or any obvious source of renal irritation than is generally supposed.

(2) The frequency increases speedily and progressively with increasing age.

(3) This increase with age suggests the explanation that the albuminura is often an indication of senile change.

(4) Though it cannot be regarded as yet absolutely proved, it is highly probable that faint traces of albumin and hyaline and finely-granular casts of small diameter are, after 50 years of age, of little or no practical importance.—*Indian Lancet.*

Toxic Hysteria.—Luhrmann (*Archiv de Neurol*, November, 1895) points out that toxic hysteria is more common than is usually supposed. Of 60 cases of hysteria in men, alcohol was the exciting cause in 18. Alcoholic hysteria is similar in all points to hysteria from other causes. Hymianæsthesia has frequently been observed, also concentric diminution of visual field, loss of color vision, and scotoma. The combination of epileptic with hysterical convulsions in chronic alcoholism was noticed. Hysterical attacks are especially likely to be brought on by a fresh drinking bout in the subjects of chronic alcoholism, in whom also traumatic hysteria is especially liable to occur. Similar manifestations of hysteria are also met with after chloroform narcosis, and in subjects of the morphine habit.—*Brit. Med. Jour.*

Advice to Medical Writers.—The editor of the New York *Polyclinic* offers a semi-decalogue to those of its friends who send to it carelessly written articles. As those friends will not have time to look at the hints, we will print them for our own use and for that of our friends—the readers of papers. The *Polyclinic's* five cardinal points for authors are: "1. In your writing be, above all things, *purposeful;* afterward, concise, relevant, definite. 2. The subject selected should contain but one definite line of thought; should not be trite; should be one in which you are personally interested; if argumentative, one in which you have con-

victions. It should be suited to your abilities and to your opportunities for forming a correct judgment, and should be no broader than the essay itself. 3. Make an outline your subject; it will enable you to read up accurately and profitably; it will afford mental discipline. 4. Be careful to pay attention to the elegance of your language; to such little things as correct paragraphing and punctuation. 5. Above all, remember that the analytical writer is the strong writer." In the body of the article the editor presents five considerations, minor, to him, apparently; but some of them of prime importance to audiences that need to sit and not get weary over *details and details and details.* These five other points, in our own language, may be condensed as follows: 1. Your audience should not be expected to do all the analyzing of your cases. 2. You need not go back to Galen and Avicenna and Sigault in every essay. 3. Where a similar line of therapeutics has been employed for a series of cases, the intelligence of your audience may be assumed to be sufficient to supply some of the gaps, as you pass with lighter hand over the later cases. 4. Make your preface short. "I will grant you," says the editor, "that there is a sort of hereditary precedent for scientific men, as a rule, to wander afield in their discussions, and to indulge in more or less verbosity of speech; but the writer who, after an intelligent discussion of the subject, brings all the evidence to bear upon a definite conclusion, is bound to be the most respected, while he who deals largely in words, sometimes utterly lacking in definiteness, will become more and more a bore, as medicine continues to make rapid progress toward becoming a science rather than an art." 5. Take down your long unused works on rhetoric and logic if you feel that you have fallen into careless ways of composition or of argument. The admonitions may be summed up in a brief commandment: Put yourself in the place of your audience as you pass along from point to point in your dissertation; be at once objective and subjective. Moreover, some of our ever-welcome medical writers find it not beneath their position to enliven their production with a dash of color of humor or personal narrative. But this is not always possible, the subject not warranting it, and with some it is impossible, the mental build of the author forbidding it.—*The Jour. Am. Med. Assoc.*

Carcinoma of the Stomach.—Dr. Klenew, *Med. Times*, has summarised his opinions on the subject of gastric carcinoma as follows:—1. The treatment of these tumors differs in no respect from that of cancer elsewhere, that is to say, it is purely surgical. 2. Operation is to be recommended, when possible, before the tumor is palpable. 3. Examination should only be made under deep narcosis, and an exploratory incision made if required. 4. Those cases only should be recommended for resection of the pylorus, where the tumor is freely movable, and there is no metastatic involvment. 5. If these conditions are not present, the formation of a fistula between the stomach and jejunum is indicated. 6. This operation should not be delayed until the patient is nearly dead from starvation, and the knife used as a last resource, for the mortality is then much greater.

OBSTETRICS AND GYNAECOLOGY.

IN CHARGE OF

J. ALGERNON TEMPLE, M.D., C.M., M.R.C.S., ENG.,

Professor of Obstetrics and Gynæcology, Trinity Medical College; Gynæcologist Toronto General Hospital; Physician to the Burnside Lying-in Hospital. 205 Simcoe Street.

TREATMENT OF PELFIC SUPPURATION BY ABDOMINAL SECTION WITHOUT HYSTERECTOMY.

BY REUBEN PETERSON, M.D.

For the purpose of this discussion the term "pelvic suppuration" will be restricted to purulent or cheesy collections within the tubes or ovaries, with or without an accompanying involvement of the peritoneum and cellular tissue. The true pelvic abscess, or a purulent inflammation of the pelvic cellular tissue following puerperal infection without involvement of the tubes and ovaries, will not be considered.

Our subject will naturally be treated from two standpoints:

1. What cases of pus in the pelvis shall be attacked by the abdominal route?

2. Provided that the abdominal route be indicated, in what cases will removal of the uterus be demanded?

The work of Péan, Jacobs and others in the treatment of pelvic suppuration by vaginal hysterectomy has been productive of a great deal of good. It has shown us what can be done by the vaginal route, if enough time be spent in acquiring a most difficult technique. It has demonstrated the possibility of vaginal exploration for diagnostic purposes, and, finally, it has brought prominently to our attention a fact long known, but of recent years somewhat lost sight of—that with a patient *in extremis* from long-continued pelvic suppuration, evacuation of the pus should be sought through the vagina rather than through the abdomen, and thus time be given the patient to recuperate before the more radical operation be resorted to. But, like all surgical procedures which have given good results in the hands of experts, the vaginal operation has been employed too frequently and in unsuitable cases. It has become almost a fad in some localities, so that we hear of men who have won enviable records as abdominal operators giving up the suprapubic route and working entirely from below. Not that I would do away altogether with these extreme views or methods. They answer their purposes in calling attention to the claims of their adherents and enabling the surgical world to select for permanent use what is really good and lasting.

In the treatment of pelvic suppuration the abdominal route should be chosen:

1. Whenever there is a chance of applying the principles of conservative surgery.
2. Whenever bilateral pus sacs are present and complete enucleation is desirable.
3. Whenever the pus points high up in abdominal cavity.

1. *Conservative Surgery through the Abdominal Route.*—Granting all that the advocates claim for the vaginal route, there is little doubt but that the suprapubic method offers better opportunities for the application of methods tending toward the preservation of the whole or part of the appendages. This is especially true where there exists a decided collection of pus in the tube or ovary on one side and a doubtful condition upon the opposite side. Here the advantages of an abdominal incision for the inspection of the doubtful appendages are marked. The appendages on the less affected side are usually bound down by adhesions from former attacks of pelvic peritonitis, even if there be no formation of pus. The abdominal route and, if need be, the Trendelenburg position enable the operator not only to feel but to see the adhesions. In this way the latter may be broken up with but slight impairment of the integrity of the tube or ovary. As Baldy stated recently before the Philadelphia Obstetrical Society, a majority of the cases of inflammatory pelvic conditions will not reveal fluid pus within the appendages. The pus has in many cases become cheesy and the tube wall thickened by repeated attacks of pelvic peritonitis. The uterus may be fairly movable, but the appendages, one or both, will be bound down to the pelvic floor by dense adhesions. It requires the greatest judgment, acquired only by experience, to determine which tube and ovary, when released from its adhesions, can be safely left. How often have we debated this question upon the operating table with the released tube and ovary between our fingers! And in more than one instance where it was deemed best to leave the appendages on one side, the result has proved the wisdom of the decision. Can any one say that this decision could have been arrived at as well had the operation been performed through a vaginal incision? Those who have operated by both routes, who have seen the difficulties attendant upon the breaking-up of dense adhesions, will not hesitate in their choice of procedures when there is a chance of preserving some portion of the appendages.

2. *Whenever Bilateral Pus Sacs are present and Complete Enucleation is desirable.*—It is my firm conviction that clean pelvic surgery should be practised whenever practicable. In other words, whenever it seems desirable to enucleate a pus tube, instead of merely incising and draining, every particle of the diseased wall should be removed. This can be accomplished much better and with less danger to the adjacent organs by the abdominal than by the vaginal route. A careful study of the work of the best operators by the vaginal route will show many incomplete operations. The purulent tubes and ovaries are removed whenever possible, but many are left behind and are a menace to the patient ever afterward. The walls of these abscesses are foreign bodies and have no place in the pelvis.

In inflammatory pelvic conditions bowel adhesions are the rule, not

the exception. These can be treated much better from above. In fact, according to the statements of the vaginal operators, if the bowel be opened high up in the attempts to separate the adhesions, the abdomen must be opened for the repair of the rent if the general peritoneal cavity has been entered. An abdominal operation does not consist merely in the enucleation of the pus sacs. The intestines may be adherent to the omentum, uterus, and one another, and a complete operation means the releasing of these adhesions so that future suffering may be avoided.

In not a few instances of bilateral pelvic suppuration the appendix is involved. In case of this complication the vaginal operator is decidedly handicapped. The condition either escapes his notice, or, if discovered, it cannot usually be safely dealt with save by an abdominal incision.

3. *Whenever the Pus points high up in the Abdominal Cavity.*—Occasionally we meet with an exception to the general rule that a pus tube is to be found resting upon the pelvic floor and easily accessible through the cul-de-sac of Douglas. It has been my experience that in pyosalpinx and ovarian abcess following childbirth the pus sacs are situated high up in the abdomen and are practically inaccessible through the vagina, unless a comparatively unaffected pelvic cavity be traversed to reach them. These cases should be treated by abdominal incision and the pus sacs enucleated or drained, according to the condition of the patient; for in many instances these large abcesses which point high up in the abdomen occur in women weakened by severe septic absorption, which renders enucleation extremely hazardous. In such cases incision and drainage will be demanded and recourse will be had later to the radical operation. I shall leave to those to whom that part of the discussion has been assigned the description of the cases of pelvic suppuration which *should* be attacked through the vagina, and pass to the second division of my subject, namely: *Provided that the abdominal route be indicated, in what cases will removal of the uterus be demanded?*

If a uterus be so diseased that its retention after bilateral removal of the adnexa is a barrier to complete restoration to health, it certainly is good surgery to remove it at the first operation. The true surgeon is not operating according to any fixed rule. He is resorting to the knife for the cure of his patient and the preservation of as many organs or as much of any one organ as is consistent with the well-being of his patient. His judgment should be unbiassed by a predetermination to apply any fixed rule to all cases. If the rule does not fit the particular condition present, so much the worse for the former. The interests of the patient are paramount. For this reason it is not good pelvic surgery to establish a universal rule that whenever the appendages are removed for bilateral inflammation the uterus also should be sacrificed; for this rule, if strictly enforced, will surely conflict with a fundamental surgical maxim that no organ should be sacrificed except upon well established pathological grounds.

Experience has shown us that many of our pus cases requiring bilateral removal of the adnexa do not regain their health; that these patients suffer from purulent uterine discharges, from metrorrhagia, and from severe reflex symptoms arising from the diseased uterus, and

that these symptoms persist in spite of curettage before and after the abdominal operation. On the other hand, we find that there are many recoveries, complete restoration to health, with no persistent uterine or reflex symptoms, when purulent collections within the appendages have necessitated their removal. To my mind it is simply a begging of the question, an intellectual shirking of a difficult surgical proplem, to adopt a universal rule that the uterus should be removed whenever both appendages have been sacrificed. Polk and others claim that the uterus under these conditions is a useless organ and should therefore be sacrificed, because *some* cases fail of cure without this additional procedure.

We have passed beyond the developmental stage of hysterectomy. The operation has been so perfected that in the hands of experts the mortality is not increased over that attendant upon bilateral salpingo oöphorectomy. On the other hand so much better, in my experience, is the convalescence in cases where the uterus has been removed that it is a temptation to do so in every case. But the conservative surgeon must needs hold his hand. We should not talk too lightly about this functionless uterus after its appendages have been ablated. There is a possibility that its importance and influence over other parts of the body is but little understood at the present time, and that future investigations will make us repent having sacrificed the organ except for the strongest pathological reasons.

Removal of the uterus means that we have no hope that the less radical measures of treatment of this organ will prove of avail. I do not believe that we are willing to make this acknowledgment in every case where both appendages require removal. Combined clinical, pathological, and bacteriological investigations will soon place us in a position where we can decide upon the operating table which case will require hysterectomy and which will not. The recent work of Wertheim, Doderlein, Werth, and others has greatly increased our knowledge of the origin and course of endometritis. It has demonstrated that gonorrheal endometritis especially is a most serious disease, both from its tendency to spread to the tubes, ovaries, and pelvic peritoneum and also because of the frequency with which the muscular wall of the uterus is affected. But I am convinced that the position of Schauta is untenable when he claims that all of the internal female generative organs should be sacrificed when it can be shown that a pyosalpinx is due to gonorrhea. Yet, at least, he is more logical in his reasoning than some other operators, because he frankly admits that in the presence of gonorrheal endometritis we are powerless to save the appendages on the opposite side. The same men who would advocate removal of the uterus when both sets of appendages have been ablated would not urge or practise hysterectomy when one side is unaffected, even though a history of gonorrhea could be clearly proved. Yet if the endometritis and metritis can be cured in the one case, why not in the other? For my own part I do not believe we are powerless, in the presence of gonorrheal disease of the uterus and appendages, to effect a cure of the former by no means short of the radical operation. My own clinical experience leads me to think that a thorough removal of the endometrium by the sharp curette and subsequent drainage will cure many cases of endometritis proved beyond doubt to be gonorrheal.

There are but four classes of cases where I would consider it justifiable to remove the uterus when both appendages have been sacrificed for purulent disease :

1. When the uterus is so diseased that less radical procedures than hysterectomy probably will fail to relieve the patient of subsequent suffering.

2. When the appendages are tubercular. In these cases we are dealing with a serious disease which should be treated by the most radical measures.

3. Where the peritoneal covering of the uterus, and even the body of the organ itself, has been badly injured by the enucleation of the purulent appendages. Here the danger of subsequent bowel adhesions and intestinal obstruction might decide one to perform hysterectomy.

4. In some bad cases of pus tubes it may become necessary to remove the uterus for the purpose of securing free vaginal drainage.

In all other cases I would advocate a thorough curettage and retention of the uterus.—*American Journal of Obstetrics.*

SUDDEN DEATHS IN THE PUERPERIUM, WITH REPORT OF A CASE.

BY WILMER BRINTON, M.D.

In calling the attention of this Society to the causes of sudden deaths in the puerperium, with the report of a case coming under my notice during the past year, I begin the subject with a quotation from the "American Text Book of Obstetrics," viz.: "No accident can happen to a woman that carries with it so much horror as sudden death at any period of the puerperium, and no physician, however great his reputation, can escape the criticism which invariably follows even when this accident is absolutely beyond his control. He should always know the causes of rapid or sudden death in the puerperium, and by explaining the utter impossibility in most cases of foreseeing or combating the death he can partially avert unjust and unkind criticism." If a physician has had the opportunity to acquire the proper theoretical knowledge of the science and art of obstetrics, and has had this theory illustrated and strengthened by proper and sufficient clinical experience, he feels competent to pilot his patient through the dangers of parturition. The knowledge he has of antiseptic midwifery, and the every-day application of the same in practice, throws around his patient before, during, and after labor a safeguard of incalculable value. Even the dangers which may arise from such complications as eclampsia, post-partum hemorrhage, contracted pelvis, placenta previa, abnormal presentations and positions, etc., may be warded off by the skill and knowledge of an intelligent and conscientious obstetrician. But the sudden death in the puerperium comes to his patient in such an unexpected and alarming manner that she is, in the great number of cases, absolutely beyond all hope before he can make use of any

remedy. I wish in this paper to differentiate rapid or sudden death which may occur immediately or soon after the birth of the child from shock, hemorrhage, rupture of uterus, etc., from the sudden death which occurs in the first, second, or even as late as the fourth week of the puerperium, and my remarks shall be devoted to this class of cases. Sudden deaths occurring late in the puerperium must be comparatively rare. The case I shall record is the only one coming directly under my notice in nearly two thousand labor cases occurring in hospital and private practice, with the exception of being called off of the streets some years ago to see a puerperal woman die just as I entered her bedroom door. The history of the case was that her physician had seen her that morning, and, as it was the tenth day of her lying-in period, he gave her permission to get out of bed later in the day, which she did. She dressed herself in a loose wrapper, nursed her child, and was attending to some minor duties in a sitting position, when in an instant she had great difficulty in breathing, her face became cyanosed, she had some slight convulsive movements, became unconscious, and died within twenty minutes from the onset of the distressing and alarming symptoms.

There are various causes of this calamity. Without wishing to inflict upon this Society a review of the literature upon the subject, I would say that one of the latest authorities claims the most frequent cases of sudden death in the puerperium, arranged in the order of their relative frequency, are embolism, entrance of air into the uterine veins, heart failure due usually to organic heart disease. But deaths have been reported from rupture of the heart due to fatty degeneration or to acute myocarditis. Sudden deaths have occurred from joy, anger, sorrow, fear, etc., the heart action in these cases being interrupted by energetic and persistent excitation of the inhibitory nerves of the heart. A great many of the older authorities insist that primary and spontaneous coagulation of the blood in the pulmonary artery occurs, and this accident is attributed to the excess of fibrim and water in the blood during the puerperium, to hemorrhage, to syncope and the diminished force of the blood current, and to the quality of the blood, changed by effete materials or by sepsis. More recent writers, however, favor the view that embolism usually, if not always, precedes the occurrence of thrombosis, and they support this belief by the uncertainty of the pathologist's knowledge of a primary thombosis in the right side of the heart and in the pulmonary artery, and by the facts that in about half of the cases a peripheral thrombus has been demonstrated; that the accident commonly occurs after dislodgment of a peripheral thrombus in either a femoral, an iliac, or a uterine vein following a sudden effort, such as assuming an upright posture, laughing, straining at stool, etc., any of which efforts do not cause thrombosis, but may loosen a thrombus; and, finally, that thrombosis of the pulmonary artery should occur more frequently, since the asserted predisposing causes are so commonly observed in the puerperium. Playfair, in a series of papers "On Thrombosis and Embolism of the Pulmonary Artery as a Cause of death in the Puerperal State," which were first published in the London *Lancet* over twenty years ago, claims, from a careful analysis of twenty-five cases of sudden death after delivery in which accurate

post-mortem examinations had been made, that cases of spontaneous thrombosis and embolism may be divided from each other by a clear line of demarcation. In seven of these cases there was distinct evidence of embolism, and in these seven cases death occurred at a remote period after delivery, in none before the nineteenth day. This fact Playfair considers contrasts in a most remarkable manner with the cases in which the post-mortem examination afforded no evidence of embolism. These amounted to fifteen out of the twenty-five cases, and in all of them, with one exception, death occurred before the fourteenth day, often on the third or fourth. This would seem to prove that in the first class of cases time is required to admit of degenerative changes taking place in the deposited fibrin leading to separation of an embolus, while in the second class the thrombus corresponds in time, and to a great extent in cause, to the original peripheral thrombosis from which in the former the embolus was derived.

Playfair has more recently added other evidence to prove that in the great majority of cases sudden death in the puerperium is the result of a primary and spontaneous coagulation of the blood in the pulmonary artery. Without denying the possibility of the occurrence of sudden death from a primary and spontaneous coagulation, yet my opinion is that the modern methods of investigation, including accurate and thorough post-mortems, microscopic research, etc., will in the future prove that the larger number of sudden deaths in the puerperium are due to a thrombosis in the uterine, pelvic, or femoral vein. Then from some exciting cause an embolus is detached, and, passing to the right heart, is arrested in the pulmonary artery, causing death within a short time.

Another recognized cause of sudden death during the puerperium is the entrance of air into the uterine sinuses. In the literature of the subject a great many cases are found reported where a post mortem proved air embolism in the uterine veins, the result of injections into the birth canal and from other causes. Still, the presence of air in the veins at post-mortem does not prove death from air embolism, for Welch and Nuttall have shown this may originate from a gas-producing bacillus, named by them "bacillus aerogenes capsulatus." The symptoms of the ailment under consideration vary. When a large-sized thrombus obstructs the pulmonary artery death may be instantaneous, as in the case I shall report; or in other cases it may be preceded by precordial oppression, extreme dyspnea, cyanosis, the pulse becoming small, rapid, and irregular. In other cases, if the embolus is small, the onset of symptoms is not so sudden and not so severe, although they are similar, in which cases death may occur after several days, or, very rarely, recovery may occur. In cases of entrance of a large amount of air into the uterine veins, respiration and circulation are immediately and desperately embarrassed. The patient may utter a cry of alarm and at once become unconscious, with or without convulsions. It is supposed in this class of cases that the cause of death is probably mechanical interference with the circulation.

Treatment in many of these cases will be of no avail; in the two cases which have come under my notice death took place almost instantaneously. If seen in time the patient should be kept absolutely at rest; stimulants

should be given by the mouth, and hypodermatically; carbonate of ammonium in decided doses has been recommended, especially in cases where the patient lingers for some time after the onset of symptoms.

The case which I wish to report is as follows: Julia M., of Mount Savage, Md., was admitted to the Maryland Lying-in-Hospital March 8th, 1895, with the history of pregnancy, and giving as the first day of the last menstrual period August 15th, 1894. She was unmarried, a primipara, aged 26, housemaid by occupation, a native of Maryland; family history good, she being one of eleven children, all living, mother living, father dying with acute pleuritus some years previously. The patient began her menstrual life at 14 years of age, and, with the exception of some of the ailments incidental to childhood, and a severe attack of grippe four years ago, she never has been sick. A physical examination made upon her entrance into hospital found all of the organs of the body in a good condition. Her pulse, temperature, and respiration were normal. No sugar or albumin was found in the urine. There was slight edema of the lower extremities. The fundus of the uterus was midway between the navel and ensiform cartilage. After remaining in the hospital about six weeks, during which time her physical condition seemed to be fully that of the average woman so far advanced in pregnancy, she began having labor pains at 9 p.m. April 13th, 1895, and was delivered at 10.15 a.m. April 14th. She was attended by our resident physician, Dr. L. G. Taylor, now of Perryville, Md., and four or five students were present. The labor took place under the most rigid antiseptic precautions. The first stage lasted ten hours and thirty minutes; the second, two hours and thirty minutes; the third, ten minutes; the placenta being expelled by the Credé method. No tear of the perineum was noted. The child, a male, presented by the vertex in the left occipito-anterior position. At birth it weighed six and three-quarter pounds and was nineteen and a half inches in length. The lying-in period of the patient was uneventful. In visiting the ward from time to time the resident physician called my attention to the fact that this woman's pulse continued rapid, and several times we interviewed and examined her. Involution was progressing favorably. She had plenty of nourishment for her child. Her lochia were of the proper amount, free from odor. Her temperature, which was taken morning and night, varied from 98° to 100.2°, the general average being 99.4°. The pulse varied from 86 to 106, with a general average of 96 per minute. At no time did she complain of either pelvic pains or pains in her limbs Indeed, at no time during her puerperium did she complain of one unpleasant symptom. Owing to her rapid pulse we decided that she should not get out of bed on the tenth day, as is the usual custom with our hospital patients if they are doing well. She objected to the delay, but when she was assured that it was for her ultimate good and she would be kept in bed only a few days longer, she assented willingly. On the afternoon of April 24th, 1895, when she was well in her eleventh day, she sat up in bed to nurse her child; at the same time she was conversing with one of the nurses who was in the ward. She continued to nurse the child while the nurse left to go down-stairs to another ward. Within two minutes

from this time the nurse was called up-stairs in great haste by a patient, who said, "Julia is dying." The house physician was sent for immediately. He found the radial pulse gone, the face cyanosed, great difficulty of breathing. He gave a hypodermatic injection of nitroglycerin, but the woman was dead within five minutes from the onset of the symptoms. It was then ascertained that after the nurse left the room she continued to suckle the child for a minute or so longer, then turned to place it in bed, when she uttered a distressing cry, placed her hand over the region of the heart, fell back in bed, became rapidly unconscious, and was found in this condition a minute later by the nurse and house physician. Owing to her living at a distance from Baltimore, permission could not be obtained to hold a post-mortem. The immediate cause of death is unknown, but from the history of her lying-in period I am of the opinion that the patient died of a primary and spontaneous coagulation of blood in the pulmonary artery.—*American Journal of Obstetrics.*

Hydrocele of the Labium Majus.—A prolongation of peritoneum may reach below the mons veneris through the inguinal ring, covering the round ligament. This peritoneal investment may become adherent about the ring, and a transudation of serum occur into the cavity thus formed. This condition is then known as hydrocele of the labium majus. It may be of several varieties (Edwards): 1. That in which there exists a patulous canal of Nuck. The fluid is excreted from the peritoneal surfaces covering the ligament, and is free to return within the general peritoneal cavity. 2. The sac may be entirely cut off from the abdominal cavity, and dropsy occur in this closed sac. 3. The cellular tissue of the labium majus consists of two layers, which are prolongations of the superficial abdominal fascia. These two layers are considered analogue of the dartos tunic, and between them a serous tumor may form. This is considered by some to be true hydrocele in woman. 4. The substance of the round ligament itself may be the site of a cyst. The gubernaculum of Hunter in the fetus becomes the round ligament in the female. This fetal structure is at first hollow, and there may be a persistence of this fetal condition which allows the formation of a cyst. Eisenhart has collated forty-eight cases of hydrocele in the female, and finds that twenty-nine were upon the right side, and nineteen upon the left. He considers traumatism and congenital defect to be the most frequent causes. Smith believes that the disease is not so rare as is stated; during a period of four years, he says five cases have been operated upon in the Tottenham Hospital. The treatment of hydrocele feminina is operative. Expose the cyst by a linear incision, ligate the neck, and enucleate. The wound is to be closed by superimposed layers, as in the closure of hernia. Simple puncture of the hydrocele is of little avail.—*Am. Jour. Obs.*

NERVOUS DISEASES AND ELECTRO-THERAPEUTICS.

IN CHARGE OF

CAMPBELL MEYERS, M.D., C.M., M.R.C.S., Eng., L.R.C.P., Lond.,

Neurologist to St. Michael's Hospital. 192 Simcoe Street.

CEREBRAL HYPERCEMIA FROM LOSS OF SLEEP.

In 1888, Lieutenant L., aged 28, was admitted to hospital in consequence of having been on ship duty for five consecutive days and nights.

He had paroxyms of cerebral hypercemia coming on suddenly several times a day, though there was some premonition, such as vertigo and headache. When having such symptoms he could walk a short distance, a half block or so, with staggering gait, but then had to lie down or fall. Upon lying down or falling he would flex his body strongly and would become unconscious. The torpor would be so deep that he could not be waked, but in an hour or so would wake voluntarily and remember what had occurred up to the moment of such sleep.

When these attacks came on, his face became flushed and during the period of unconsciousness cyanosed, but upon waking would resume its natural color.

Under medication it was found that nothing would abort the paroxysms, but a large dose of bromide of potassium or soda, given promptly when the face began to flush, would render the paroxysm less severe, though the after effect seemed to be injurious, as it left him in a semi-torpid condition for some time after the ordinary duration of the attack. After several days' treatment he happened one day, when a paroxysm was coming on, to be in the office where galvanism was accessible, and I quickly applied a current of 5 ma. to head, moving the positive pole over the forehead and holding the negative steadily at the back of the neck, and continuing the application for five minutes.

He experienced immediate relief; the flushing and headache disappeared and the attack was averted. From this time on the same electrical treatment was given whenever he had any flushing of face or headache, and always with the same salutary effect. In the course of a few days it was found that a seance of a minute only was all that was required. After two weeks of such treatment the patient seemed perfectly well, but the momentary application of the current was made occasionally when the patient felt the least anxiety about himself for some two weeks longer, when he was discharged convalescent, but was advised not to do any mental work for a long period. He, however, soon after resumed his studies, visited Washington, was examined and promoted. He has since been well and in active service.—*Med. Times.*

PAROXYSMAL HEADACHES.—In three cases of periodic headaches I had occasion to test the efficacy of ergot, as recommended in this morbid condition by Thomson. The subjects were of a more or less nervous temperament, and had suffered for a considerable time from frequent and violent attacks of headache; they gave no history of malaria. Quinine, as well as most of the analgesics and antinervines known, had been tried in vain, when I began to administer ergot. The beneficial effect soon became manifest. The patients were completely cured after having taken daily one drachm of fluid extract ergot, mixed with three drachms elixir of cinchona, for three consecutive days. This did not occasion nausea or vomiting, which fact I ascribe to the circumstance that I employed three times as much elixir cinchona as fluid extract ergot.—CAPPELLARI, in *La Semaine Médicale.*

TUMOR OF THE SPINAL CORD WITH UNUSUAL CLINICAL PHENOMENA.—(Wiener medicinische Klub, published in *Wiener medicinische Wochenschrift,* No. 6, 1896.) By. H. Schlesinger, M.D.

Some time after traumatism paralysis of the right upper and paresis of the right lower extremity developed, with great atrophy of the muscles of the right shoulder, which made movement at this part impossible. The head could only be slightly bent. The great atrophy of the shoulder contrasted notably with the excellent development of the musculature of the forearm and hand. The reflexes were slightly increased in the upper extremities and were abnormally vigorous in the lower. On the entire body tactile sense was normal, sensibility to pain was somewhat increased, but over the shoulder musculature and the right deltoid thermal sense was notably decreased. Except a slight ataxia of the right upper extremity there was no disturbance of the muscular sense. Later the muscles of the left shoulder became atrophied, and severe pain developed, radiating into the right hand and posterior part of the head, especially on the right side.

There was no vesical nor rectal disturbances. Later in the disease the patient had convulsive attacks, lasting five to ten seconds and involving the entire body, accompanied by opisthotonos and trismus, and without loss of consciousness.

The radiating pains, the hyperalgesia, and the rapid course were contrary to a diagnosis of syringomyelia.

The paralysis and atrophy indicated involvement of the second to the fifth cervical roots.

On account of the great prominence of the sensory systems and of the probability of a lesion of a transverse nature, the diagnosis of tumor of the cord was made, and because of its rapid development it was supposed to be a gliosarcoma.

The autopsy showed a tumor of the cervical cord, which extended downward from the motor decussation, and involved the right side especially. The freedom of the small hand muscles from atrophy was contrary to the usual condition of tumors of the cord.

It is desirable to know exactly how much of the posterior columns was destroyed in this very interesting case, as vesical and rectal fibres and

those of tactile and muscular sense are supposed by some authors to be located here, and in this case these functions were not notably affected.

A Clinical Study of Trional.—Galliard, in a paper read before the Academy of Medicine, Paris (*Medical and Surgical Reporter*, Oct. 19, 1895), states that he has employed this drug in forty cases of sleeplessness, in all but one of which it was administered by the mouth in single doses of fifteen grains.

A review of these cases shows that only seven patients proved refactory; in the others the effect persisted at least a few hours, or even the entire night.

According to this author, trional has neither antipyretic nor analgesic properties, is incapable of alleviating cough or acting upon night sweats, but is to be regarded as a simple hypnotic, especially indicated in ordinary insomnia associated with neurasthenia. In the majority of cases in which it was prescribed it proved of service, and it was found physiologically compatible with other remedies administered at the same time, and not liable to cause serious complications. In the majority of cases no after-effects were noticed, the awakening being agreeable. In a few instances there was a feeling of emptiness in the head, vertigo, and slight nausea. The drug was not found to influence the circulation even in cardiac cases. The respiratory and digestive tracts were not affected.

According to Morro, trional is completely decomposed in the organism, and therefore does not appear in the urine in the same manner as sulphonal. Schaumann says that trional has no influence upon the metabolism of the tissues and, unlike chloral, does not destroy albuminous substances.

The author's conclusion is that trional in doses of fifteen grains is innocuous and serviceable in insomnia due to various causes. As it is but slightly soluble in warm water, it is best given in wafers, the administration being followed by a cupful of warm fluid in order to accelerate its hypnotic effect.

As to whether trional is to be preferred to sulphonal, the author states that the hypnotic effect of the latter is often slow, while trional has the advantage in the majority of cases of producing sleep at the end of twenty to twenty-five minutes, and sometimes in even a shorter time.

Nitro-Glycerin in the Treatment of Sciatica.—Dr. William C. Krauss of Buffalo, N.Y., read a paper on this subject before the Medical Society of the State of New York, recently held at Albany.

Although sceptical in regard to new measures and remedies, in the face of the abundance of measures recommended, such as electricity, heat, cold, acupuncture, nerve stretching, hypodermic injections, splint, extension, rest, cauterization, not to speak of the innumerable medicinal agents, he, however, tried Nitro-Glycerin and reported seven cases, all of which were speedily cured or greatly benefited.

The administration of Nitro-Glycerin should be as quickly as possible after the onset of the pain, whether it be neuritic or neuralgic in character; beginning with one minim of the one per cent. alcoholic solution

and increasing until the peculiar physiological effects of the drug are obtained. Seven cases were reported and are here briefly summarized:

Case I. Male; age 50-60; has been a frequent sufferer of rheumatism and sciatica for years. On Thanksgiving day, 1895, he was taken with an acute attack of sciatica. Various measures were tried without any effect and the case was turned over to the writer. Nitro-Glycerin in 1 minim doses of the one per cent. solution, three times daily, was prescribed, and in three days the severe pain had disappeared, and after ten days the patient was freed from all sciatic pain.

Cases II and III were that of a husband and wife, both suffering with acute sciatica. The husband, however, had been a rheumatic for some years and had also had gout. In two weeks time under the Nitro-Glycerin treatment both were relieved of the sciatica.

Case IV, that of a stenographer, used to sitting ten hours daily on a hard-bottom chair, began to complain of symptoms denoting a neuritic affection of both sciatic nerves. Nitro-Glycerin and rest thoroughly dispelled these symptoms and in a short time she was again able to resume her customary work.

Cases V, VI, and VII were hospital cases, and received marked benefit from this form of treatment.

The disagreeable effects of the Nitro-Glycerin, as congestive headaches, flushing, etc., may be relieved by the bromides.

The author does not claim that it will cure every case of sciatica, but if it relieves fifty per cent., it will be doing what no other single drug has heretofore done.—*Alienist and Neuroligist.*

Multiple Neuritis and Landry's Paralysis.—Dr. George L. Walton, in an article on Multiple Neuritis the Essential Element in Landry's Paralysis (*Boston Medical and Surgical Journal*), attempts to demonstrate with the aid of the statistics of 121 recorded cases and the report of a case from his own practice, the practical clinical identity of Landry's paralysis with a well-recognized form of toxic neuritis, as advocated by James Ross in 1889, and believes Landry's Paralysis should be classified under Neuritis, rather than under diseases of the cord.

Dr. Walton describes Landry's paralysis as an acute toxic disease, characterized by rapid loss of power in the lower extremities, trunk, and to a less degree in the upper extremities, affecting also the vagus and phrenic, sometimes other cranial, nerves. The affected muscles are lax. Pain, paresthesia, anesthesia, and tenderness are generally present in varying degrees, though in some cases sensory disturbances are wanting. Death follows in more than half (64 per cent.) of the cases. Recovery when present is very slow. The reflexes, deep and superficial, are lost at an early stage; wasting and reaction of degeneration appear if the patient survives. The process is a toxic affection of the peripheral nerves (neuritis), cord and brain, the former being the essential and persistent lesion. These introductory observations, he says, will enable us to appreciate, on the one hand, how closely his case conforms in its essential characteristics to the type of so-called Landry's Paralysis, and on the other, how appropriately it falls under the head of the now well-recognized toxic multiple neuritis.

THE PHENOMENA OF FATIGUE.—Foster, the physiologist, and Masse, of Turin, who have been experimenting upon animals for the purpose of determining the factor that produces the sense of fatigue, have concluded that the condition is attributable to poisoning of the cerebrum by products of retrograde metamorphosis; that the blood of a tired animal is poisoned, and when injected into another animal the normal buoyancy of the recipient is supplanted by the phenomena of fatigue. These experimenters declare that the toxicity of the blood may become so pronounced as to terminate fatally, and confirm the statement by citing instances of rabbits having been pursued until overtaken by death.—*Phys. and Surg.*

MALARIAL NEURASTHENIA.—Dr. Triantaphyllides of Batoum, says (*Med. Week*) malarial neurasthenia is observed in patients presenting no sign of chronic malaria, such as enlargement of the spleen or liver, anæmia, fever, etc. It is important to know that such a condition may exist, as it differs from ordinary neurasthenia in that it readily yields to suitable treatment, in which quinine plays the most prominent part. During the past five years he has seen about fifty cases of this affection, the malarial origin of which was proved by the presence in the blood of the characteristic hæmatozoa, and by the beneficial effect of quinine. The slightest form of neurasthenia due to malaria consists in a state of apathy or physical discomfort. In a higher degree of development, malarial neurasthenia presents almost all the psychical, amyosthenic, vasomotor and other disturbances of ordinary neurasthenia. Disturbed sleep, digestive troubles and general headache are less constant in malarial neurasthenia than in Beard's disease. The area of spinal hyperæsthesia is also less marked and not always present. The umbilical area is rarely absent, so that, in the majority of patients suffering from malarial neurasthenia, a sharp pain may be determined by compressing the umbilical region on the left side. Malarial neurasthenia rarely sets in suddenly, usually being preceded by vague neuropathic disturbances, and developing by paroxysms. After a number of these paroxysms have occurred, the neurasthenic condition becomes permanent. Prompt recovery is usually obtained in cases of recent date by means of from one to four hypodermic injections of neutral hydrochloride of quinine, the dose of each injection being from 60 centigrams (9 grains) to 1 gram (15 grains). In cases of relapse a larger number of quinine injections are required. In cases of old standing, usually more or less rebellious to preparations of quinine, Dr. Triantaphyllides has obtained good results from the administration of sulphite of cinchonine either by the mouth or subcutaneously, or sulphate of cinchonidine, assisted by certain accessory measures, such as wetpacking, suspension, and sea-bathing.

FOR IRRITABLE BLADDER DUE TO EXCESSIVE PHOSPHATURIA.—*Méd. Mod.*—

Acid, benzoic	āā ʒ ii
Sodii biborat	
Aquæ	ʒ vii

S.—One or two teaspoonfuls at a dose.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

H. B. ANDERSON, M.D., C.M.,

Pathologist to Toronto General Hospital; Professor of Pathology Trinity Medical College, and in charge of the Trinity Microscopic Pathological Labratory, Toronto General Hospital. 223 Wellesley Street.

A CASE OF ACUTE HÆMORRHAGIC SEPTICÆMIA TREATED BY ANTISTREPTOCOCCUS SERUM.

BY

CHARLES A. BALLANCE, and FRANCIS C. ABBOTT,
M.S., F.R.C.S., M S , F.R.C.S.,
Assistant Surgeon, St. Thomas's Hospital. Resident Assistant Surgeon, St. Thomas's Hospital.
(With Note on the Mode of Preparing the Serum, by T. J. BOKENHAM, M R.C.S., L R.C P , late Research Scholar, British Medical Association.)

It appears desirable to publish at once the following case in the interest of those who make *post-mortem* examinations or are otherwise exposed to septic infection.

HISTORY OF THE CASE.

Dr. G. M., aged 30, pricked his thumb in making a *post-mortem* examination on a case of suppurative peritonitis at 1.45 p.m. on Monday, June 8th. At 7 p.m. the thumb began to throb, and during the evening this throbbing increased to burning pain, and between 9 and 10 the red lines of lymph duct inflammation had extended as far as the axilla, and the glands in this region were enlarged. At 4 a.m. on June 9th pain and tension of the pad of the thumb were so great that nitrous oxide gas was given and an incision made. Previous to this, vomiting had occurred, and there had been several shivering fits. The temperature at 7.30 a.m. was 103° F.

At 9.30 a.m. he was seen by one of us. The whole body was covered with a scarlet septic erythema; the face was puffy and the eyes suffused. The patient complained of severe shooting pains up the arm, and in the intervals of pain was listless and drowsy; the temperature was high and the pulse rapid and soft. It was arranged at once to take him as soon as possible to St. Thomas's Hospital, where he was admitted about 3 p.m.

The condition gradually got worse, and on the evening of the following day (June 10th) the temperature was 104.7°, and the pulse 150, soft, feeble, irregular at times, and running. The rash was very brilliant, and hæmorrhagic in places. All day drowsiness had been a marked feature, and the respiration was more rapid than normal, and occasionally jerky. Nourishment was taken with difficulty. There was soreness of the throat, which was of a brilliant red color. During the day vomiting occurred several times, and also slight bleeding from the nose. Coughing,

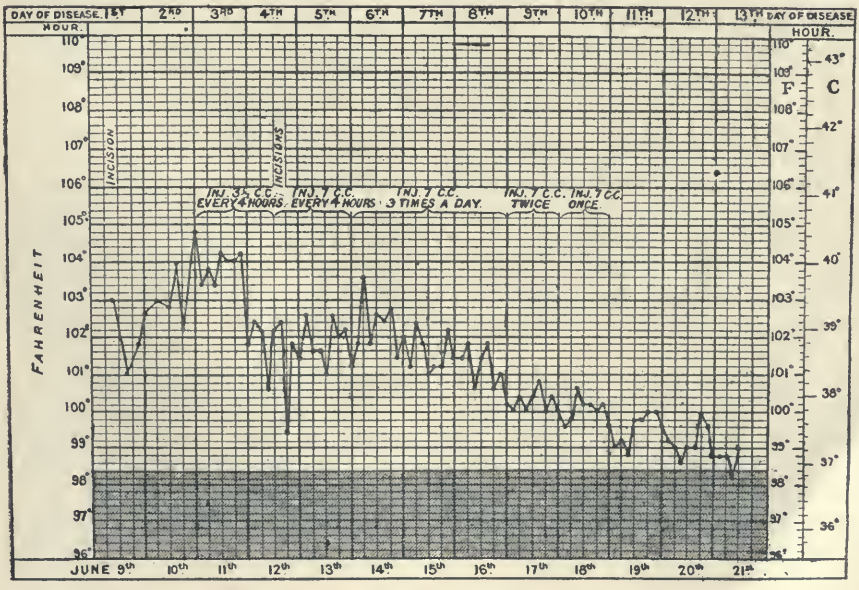
too, was troublesome, and he hawked up blood-stained mucus from the pharynx. There was no swelling of the thumb, and no discharge of pus from the incision; but there was great pain and tenderness along the forearm and arm, though without obvious swelling or œdema. The axillary glands were large and tender. The red lines were obscured by the rash, but the hard lymph cords could be felt. There was frontal headache, and the mind was clouded. The tongue had gradually become coated and dry, and was passing into a typhoid condition. There was slight albuminuria.

At midnight (June 10-11th) 3.5 c.cm. of antistreptococcus serum (Burroughs and Wellcome) were injected. This was repeated every four hours. Six hours after the first injection (6 a.m., June 11th) certain indications of improvement were manifest:

1. The mind was clear, and the headache had disappeared.
2. The respiration was regular and less rapid.
3. The pulse was slower.
4. The tongue was moist along the edges.

June 11th. All this day the temperature was continuously 104° F. Cold sponging, which was done several times, had no real effect. The tongue continued to clean, but a smart attack of epistaxis occurred. The rash was still as bright, and the blotchy subcutaneous hæmorrhages were more evident. Towards evening, after the epistaxis occurred, the pulse became much more rapid and weak, and gave rise to much anxiety. Strychnine and digitalis were ordered every four hours.

During the night the temperature dropped, but much pain and some swelling were noticed in the ball of the thumb, and there was tenderness above the wrist on the radial side, with slight œdema. Notwithseanding the bad night, the general condition was better.



On June 12th the skin was moist, and the tongue was steadily cleaning from the edge, leaving a marked pink moist surface, such as is seen on the throat in diphtheria when the membrane clears under the use of antitoxin. Chloroform was given by Mr. Tyrrell, and an incision into the thenar eminence, opening the sheath of the tendon, was made; also one over the first phalanx of the thumb. The parts, though swollen and tense, contained no visible pus. At midday the dose of antitoxin was doubled, 7 c.cm. being injected every four hours.

The chart will show from this date the gradual canvalescence of the patient. No further incisions were necessary, the swelling and œdema above the wrist gradually disappeared, and the incisions all began to heal without any visible discharge of pus. The rash did not disappear entirely until June 16th.

REMARKS.

The use of the antitoxic serum appears to us to have produced the following effects:

1. The mind became clear, notwithstanding the high fever.
2. The frontal headache ceased.
3. The tongue began to clean and become moist from the edge until it was clean, moist, and of a peculiar pink color all over.
4. The pulse became slower and of better quality.
5. The respiration was slower and never jerky afterwards.
6. The skin, which was dry and burning, became moist, and sweating occurred.
7. The wounds healed without suppuration, and the threatened inflammation of the great synovial sac under the anterior annular ligament subsided.

Every care was taken to asepticise the syringe used for the injection, to cleanse the skin at the site of injection, and to maintain the sterility of the serum by keeping it in ice, and using other obvious precautions. The injections were given into the loin and abdominal wall. Notwithstanding the large number of injections (28 in all, 8 of 3½ c.cm., and 20 of 7 c.cm.), no local reaction has occurred at all except a fleeting urticaria limited to the site of injection, which was noticed once or twice, and did not produce any inconvenience.

The recovery of this case would seem to encourage the employment of antistreptococcus serum in many other serious surgical conditions. Amongst many others the following occur to us: fracture of the skull with risk of suppurative meningitis, acute necrosis, acute septicæmia or pyæmia from any cause, rapidly spreading gangrene or cellulitis, erysipelas, general suppurative peritonitis, and septic complications of middle ear disease.

With regard to dose, we should be inclined to commence by injecting a large one—say 20 c. cm.—and then to give a smaller dose—say 7 c. cm. every four hours. After most of the injections given in the above case, the temperature temporarily dropped, but soon rose again, and we fancy that it is of great importance to give the injections frequently.

We append a note by Mr. Bokenham, who supervised the preparation of the serum, as to the animal from which it was obtained, the method

employed to immunise the animal, and the tests carried out to estimate the antitoxic value of the serum from the immunised animal.

ADDITIONAL NOTE ON THE PREPARATION OF ANTISTREPTOCOCCUS SERUM BY T. J. BOKENHAM, M.R.C.S., L.R.C.P.

Practitioners in this country have as yet had but little experience as to the effects of serotherapy on pyogenic affections. Reports have certainly appeared in the medical journals of isolated cases treated in this manner, but the supply of serum has been altogether too scanty to allow of anything like an extended trial of its merits. The whole matter is, therefore, still more or less in the experimental stage.

On the Continent, thanks to the energetic labors of Marmorek and of Henri Roger, both of Paris, it has been possible during the past twelve months or so to observe the influence of "antistreptococcus serum," on a considerable number of affections and symptoms directly or indirectly due to the presence of streptococci. Reference to several publications bearing on the subject will be found at the end of the present note. It may be stated generally that these nearly all tend to show that, given a carefully prepared and tested serum such as that issued from the Institut Pasteur, the serotherapy of pyogenic affections may be expected to yield results superior to those obtainable by any other mode of treatment.

The very remarkable case above reported cannot fail to attract the attention of others to this mode of treatment, so that although it had been originally my intention to refrain from making even a preliminary statement on the subject of streptococcus serotherapy until a larger amount of evidence was forthcoming as to its value, I feel that further delay is no longer justified.

I have therefore endeavored to set forth in the following notes a brief account of the nature, mode of preparation, and the means employed for estimating the activity, of the "antistreptococcus serum" prepared by myself, and supplied to the profession through the firm of Burroughs, Wellcome & Co.

1. Antistreptococcus serum obtained from the blood of an ass which has received during several months repeated and increasing injections of living virulent streptococci.

2. It will be seen at once, therefore, that the principle involved differs in important respects from that involved in the preparation of antidiphtheria serum. In this last it is the toxins, formed by diptheria bacilli in bouillon cultures, which are employed to set up immunity in animals furnishing the serum. Antistreptococcus serum resembles rather the diptheria "antimycetine" as prepared by Klein than the antitoxin ordinarily obtainable, and may be expected to possess antimycotic rather than antitoxic properties.

3. The ordinary streptococcus of the laboratory is practically useless for the production of an active serum. Cultures obtained from various sources—among others from my friends Drs. Marmorek and Roger—failed altogether to give any satisfactory results until their virulence had been reinforced by successive passages through susceptible animals, or by other means which need not be here described.

4. Each injection of streptococci was always followed by considerable

local and general reaction, characterized principally by local swelling and rise of body temperature. Such disturbances usually continued during several days, but ultimately a complete recovery took place.

5. Tests applied to the serum obtainable after each injection showed a steady increase of its antimycotic powers. Such tests are carried out as follows: The lethal dose of a standard streptococcus culture having been ascertained, similar quantities of culture are mixed *in vitro* with various proportions (*a*) of normal ass serum, (*b*) of the serum to be tested. On injecting these mixtures into animals of nearly equal weights it is readily demonstrable that while the control mixtures are almost uniformly fatal, those containing the prepared serum in proper proportion are practically innocuous. A maximum of one-hundredth of a cubic centimetre of serum should neutralise and otherwise lethal dose of streptococci.

6. It has been demonstrated that streptococci may remain in the blood of an animal for several days after their introduction. To ensure their absence from serum intended for clinical use, it is therefore imperative to remove all chance microbes by filtration through porcelain. In actual practice Chamberland filters are used, and the serum is made to pass through them by pressure furnished by liquid carbonic acid gas. The actual pressure required need seldom exceed one of about 70 lbs. to the square inch, such a pressure being conveniently secured by using one of Uhlmann and Keutgen's regulating valves in connection with the cylinders of compressed gas.—*Brit. Med. Journal.*

Acute Gangrenous Pancreatitis. V. Bonsdorf and Sievers de-describe two cases of acute gangrenous pancreatitis of which the cause was unknown. The symptoms were in many respects similar to those of acute intestinal obstruction. In both were found areas of fat necrosis, in the glands in the mesentery, appendices epiploicæ, kidney capsule, and other places. Their size varied from that of a linseed to that of a pear, and they consisted of a yellowish-white detritus. Beside the fat necrosis there was ascites, the fluid being of a brownish colour from admixture of altered blood.—*British Medical Journal.*

The Alkalinity of the Blood in Relation to Immunity. Calabrese (*Il Policlin.*, February 15th, 1896), as the result of an extensive investigation of this subject, comes to the following conclusions: The alkalinity of the blood goes on increasing *pari passu* with the acquisition of immunity or refractoriness towards disease, however produced. The immunised organism responds to deleterious agents with augmented alkalinity, moderate in degree and lasting some time, and never giving place to a diminished alkalinity with respect to the normal, as happens in the healthy organism. Rabbits immunised againt anthrax, diphtheria, etc., do not resist poisons different from those against which they have been vaccinated, but present nevertheless a notable delay in death as compared with control animals. Finally, the author asserts that the alkalinity of the blood is the most powerful and most constant of the means of defence which the immunised organism puts into play to defend itself against hurtful agents and to annul the evil effects of the same.—*British Medical Journal.*

NOSE AND THROAT.

IN CHARGE OF

J. MURRAY McFARLANE, M.D.,

Laryngologist to St. Michael's Hospital. 32 Carlton Street.

A NEW SEMIFLUID PRODUCT, OLEO-STEARATE OF ZINC.

BY WALTER F. CHAPPELL, M.D.,

Surgeon to the Manhattan Eye, Ear, and Throat Hospital.

Medicinal remedies for intranasal, pharyngeal, and laryngeal use should be more or less fluid, non-irritating, protective, tenacious and easy of application. Owing to the necessarily fluid character of spray and douche solutions, these conditions are not fulfilled by them; neither do these solutions remain in contact with mucous surfaces long enough to produce their fullest remedial benefits.

The semifluid oily preparation described by me in the *Annals of Ophthalmology and Otology* for April, 1895, met many of the objections to sprays, but the lard and petroleum products of the base did not prove entirely satisfactory. The taste was unpleasant, and they did not retain the same density at all temperatures.

Mr. W. J. Evans, of the house of McKesson & Robbins, has carried out certain suggestions of mine in the formation of a new compound—oleo-stearate of zinc—which is chemically and pharmaceutically perfect, and is a valuable advance in the pharmacy of semi-fluid preparations. This stearic compound is prepared by combining a form of stearate of zinc with benzoinated liquid albolene, to make an opaque, semifluid, white creamlike product, having a specific gravity at 60° F. of 0.832. It does not precipitate at the temperature of 212° F. and remains fluid at 14° F. and lower. It is neutral to litmus paper, almost tasteless, and entirely non-irritating to any mucous membrane.

My experience with this preparation has been chiefly in the treatment of diseases affecting the linings of the upper respiratory passages, but it may be used as an affective application to the skin or to any mucous surface. In my experience the oleo-stearate of zinc is specially valuable for intranasal applications in cases of diphtheria and scarlet fever, and in all diseases of the upper air tract occurring in young children. When applied in the nose with a camel's-hair brush, it clings for hours to the glandular openings or to any abrasions or spots of ulceration on the mucous membrane. It is readily diffused over the membrane of the naso-pharynx, pharynx, and larynx; it may also be applied to the latter with a medicine dropper.

The oleo-stearate of zinc may, of course, be employed alone or in such combinations as the nature of the case indicates. The following combi-

nations have, in the writer's experience, been most valuable: *Oleo-stearate of zinc with balsam of Peru,* in conditions requiring stimulation and healing. *With liquor plumbi subacetitas,* in acute rhinitis, or the coryza accompanying a common cold. *With boric and carbolic acids,* in copious watery nasal discharges and hyperæmic conditions. *With iodine,* in dry and atrophic rhinitis and ozæna. *With tannic acid,* in nosebleed, and catarrhal conditions characterized by yellow discharges. *With camphor and menthol,* it is cooling, and therefore available in hay fever and coryza. *With acetanilide,* it is applied after operations as an antiseptic and protective. *With antipyrine,* as a hæmostatic in recurring epistaxis, and as a sedative in irritable conditions of the mucous membrane. *With oleum pini pumilionis and eucalyptol,* it is soothing and curative as an intratracheal injection, in chronic bronchitis and asthmatic affections. *With oleum pini pumilionis,* as a sedative in irritable conditions of the nasal mucous membrane characterized by excessive sneezing. *With orthochlorphenol,* it is valuable in syphilitic ulcerations and ozæna.—*New York Medical Journal.*

THE IRRITANT ACTION OF SALICYLIC ACID ON THE AIR-PASSAGES.

Irritation of the nasal, pharyngeal, and bronchial mucous membrane as the result of the inhalation of air laden with particles of salicylic acid or of an atomized solution has been mentioned by a number of writers, but Dr. Ludwig Ebstein, who has an article on the subject in the *Wiener klinische Wochenschrift* for March 12th, remarks that he has found reported only one instance of a definitely observed case in which the phenomena were described, namely, a case of hæmorrhagic pharyngitis and dysphagia recorded by Wolfberg. He himself has had the opportunity of observing a case, and he embodies a report of it in his article.

The patient was a man, sixty years old, a maker of preserves. For two years he had suffered with a tormenting cough, by day as well as by night, accompanied by difficult expectoration of a very thick, gray mucus. In April, 1895, his condition became so aggravated that there was often dyspnœa in the daytime, the cough increased in intensity, and every night he was suddenly awakened with a feeling of suffocation, so that he had to resort to the inhalation of steam, whereby he was enabled to cough up with difficulty a scanty, thick secretion, and the dyspnœa was rendered more tolerable. Up to the middle of September, when Dr. Ebstein first saw the man, the symptoms mentioned kept on increasing, together with a sense of dryness. The whole nasal mucous membrane was then of a dusky-red color, with a very scanty secretion, and the nasopharynx showed the same appearances. The pillars of the fauces appeared as inflamed swellings which were thrown into horizontal folds when swallowing movements were executed. The upper part of the larynx showed nothing abnormal beyond moderate inflammatory redness and swelling, but the vocal cords showed a striking change in the neighborhood of the vocal processes—on the upper surface of each cord, pro-

jecting beyond its border, there was an œdematous, tumor-like swelling, and the two cords "smacked" perceptibly on phonation. The trachea, which was readily visible to a considerable depth, showed a uniform swelling of the mucous membrane, which was of a deep-red hue and covered here and there with thick, gray secretion. The swelling was so great as to produce a notable stenosis, reducing the calibre to the size of one's little finger. There was manifest stridor with each inspiratory and expiratory movement, and both these movements were prolonged. There were dry, piping murmurs in all parts of the chest. The diagnosis arrived at was that of bronchitis sicca with slight emphysema.

The swelling of the tracheal mucous membrane was somewhat reduced by five days' inhalations of a spray of a weak solution of sulphate of zinc, but expectorants had not the slightest effect on the thick bronchial secretion. Inhalations of atomized solutions of sodium bicarbonate, sodium chloride, etc., served—so the patient said—only to increase the sensation of dryness. Finally, iodide of potassium was prescribed, as recommended by Cantani, and proved to be most efficacious; the secretion became thinner and the swelling of the tracheal mucous membrane grew manifestly less pronounced. In short, at the end of four weeks the man was entirely free from his troubles. But in five days after his returning to his work he had a relapse, and then for the first time it came out that he was in the habit of handling salicylic acid in his occupation. A resumption of the treatment accomplished a cure again in the course of three weeks. Then the man gave up the use of salicylic acid, and he had no further return of the trouble. Although he had employed the acid for years, it is noteworthy, says Dr. Ebstein, that the pronounced aggravation of his symptoms had followed close upon his giving up the use of the crystalline acid and using the amorphous form instead.—*Ed. New York Medical Journal.*

SOME RESULTS OF INFLUENZA: THEIR METHOD OF TREATMENT.

There are few diseases which present such a variety of after-effects as epidemic influenza. Some of the sequelæ are more common than others, and consequently the general line of treatment with regard to these is pretty clearly defined, while others are comparatively rare, and afford but scant opportunity for forming correct conclusions as to how they may be best dealt with.

Some short time back I had what appeared to be an ordinary attack of influenza, inasmuch as the nasal discharge almost entirely subsided in the course of two days. But I soon began to experience a constant feeling of faintness, and *both nostrils appeared to be unusually blocked on lying down at night.* After a few doses of liquor strychniæ the faintness disappeared, but the blocking of the frontal sinuses became worse and worse, till at last it was utterly *impossible to get sleep except in the upright position* (*i. e.*, in an armchair), and then for a very short time. *On going into a hot room the difficulty of breathing through the nose in-*

creased, the cheeks became red and flushed, and at night the feet, and often the face, became burning hot, though there was little or no rise of temperature. All the time the nose remained perfectly dry, and it was impossible to get any passage through it on blowing with a pocket handkerchief. *Steaming only seemed to have the effect of making it, if anything, worse.* The distress produced was really terrible, and the loss of sleep brought about such a feeling of exhaustion that at one time it appeared as if I should lose my reason. Nothing in the shape of medicine seemed to do any good, but boiling-hot *Bovril certainly gave me some relief* in about twenty minutes after it was taken. *On dry frosty days I fancied there was some improvement.* After being bad for about five or six weeks I went to see one of the chief London specialists, who confirmed my view of the case, viz., its being a vaso-motor paralysis, and told me that little could be done in the way of treatment—that in all probability it would go on for two or three weeks longer, and that if improvement did not take place as expected, a change to the seaside would be necessary. The local application of cocaine which I had been trying he said was of very little use, inasmuch as contraction of the blood-vessels first brought about after a time gave place to dilatation. A pill of strychnine and arsenic (gr. 1-24th of each) three times a day he thought might do some good; but I fancied the pil. phosphori co. was of more service. Two days after my visit to London I was very much worse, and I then went to one of my local medical brethren and told him how really weak and ill I felt. He said he had a prescription for a snuff which had been extracted from the *Lyons Medical Gazette,* and although he did not know its effect, advised me to try it. It consisted of 1 grain of cocaine, 2 grains of menthol, and 100 grains of boric acid. Within a few minutes of taking the first pinch I obtained a marvellous relief for about an hour, and by its continued use I got more and more ease till at last the necessity for it almost entirely disappeared.

When speaking to another medical man about my own case a short time after, he told me he had suffered for a year or two past with naso-pharyngeal catarrh and throat deafness following upon influenza; that he had consulted an eminent London throat specialist who had recommended various inhalations and throat sprays, but without much benefit resulting. I then suggested he should try the same kind of snuff that had proved of such service to me, and the result he subsequently told me was beyond his expectations. In about a week or two he was almost entirely free from his throat trouble, and could hear perfectly well. Of course, as he said, he had to use it occasionally, but it always gave him relief.

I cannot help thinking it might prove useful in some cases of ozæna, post-nasal diphtheria, relaxation of the posterior palatine arches, and hay fever. At any rate, it demands a trial.—*Medical Press.*

PAEDIATRICS.

IN CHARGE OF

J. T. FOTHERINGHAM, B.A., M.B., C.M.,

Physician to Out-door Department Toronto General Hospital ; Physician to Out-door Department Hospital for Sick Children.

There is no special department of practice in which there is less room for the specialist in practice than in this one of Diseases of Children. The work, while special in character, is done by the general practitioner, who in virtue of his presidency at the birth usually attends the child till adult life removes him possibly from his care. And still it is peculiarly in this department that advance depends upon the pure specialist. For instance, the work done in placing Infant Feeding on a scientific and rational basis has been done entirely by a score or two of men whose names are barely known to the hundreds of general practitioners, and of course utterly unheard of by the thousands of patients who are reaping the fruits of their labor in laboratory and infirmary. It will be the aim of this Department of THE LANCET to place the general practitioner and the special investigator as far as possible *en rapport* as space will allow. One is tempted to express surprise that so little attention is paid to Pædiatrics in the schools. But it has been so far impossible to add to the work laid upon the groaning under graduates. We can safely say though that with the advent of the eight months' session there should and will come definite instruction in this department.

WHAT IS THE VALUE OF OPERATIVE INTERFERENCE IN THE TREATMENT OF EPILEPSY ?—Based on an analysis of seventy cases taken from contemporaneous literature.—E. G. Mason says (*Med. News*, 1896, March 21) that in these matters the skill and judgment of the physician will, of course, be the most powerful factors, but there are certain broad principles which should always be borne in mind :

(1) Always consider an epileptic fit as a symptom of some underlying condition. (2) Inquire particularly and very carefully about the first convulsion : What was its apparent exciting cause ; what was its character, general or affecting only certain portions of the body, and what portion of the body was affected at the beginning of the fit ? (3) If there was an aura investigate it carefully, as it will not infrequently give a clue as to the seat of the lesion. (4) If there has been a trauma or a suspicion of trauma, shave the head and look carefully for a scar or a depression. If there is evidence of a trauma in a position corresponding to the initial symptoms of the fit an operation is usually justifiable. (5) If you cannot get a clear history of the case give a placebo and place the patient under competent serveillance until you can satisfy yourself as to

the character of the fits. (6) Do not operate on a porencephalic child and expect to cure the epilepsy. Do not, as a rule, operate on a case of post-hemiplegic epilepsy in a child and expect to cure. (7) Do not operate on an old, idiotic epileptic, a victim of idiopathic epilepsy, with general convulsions of years' standing.

What, then, is the value of operative interference in the treatment of epilepsy? In the light of our present experience it will be fair to put it thus:

a. A certain small percentage of the cases will be cured.

b. A certain larger percentage will be improved.

c. An even larger percentage still will not be improved at all.

d. An operation upon almost any case will produce a temporary cessation of fits.—*Paediatrics.*

Typhoid Fever in Children.—Dr. W. B. Northrup read a very interesting paper on this subject before the Section on Pædiatrics, New York Academy of Medicine, November 14th, 1895. He points out that unless there be an epidemic and unless in each case the characteristic symptoms exist, temperature curve, rash, and enlarged spleen being the most important, the diagnosis of typhoid must be made with the utmost caution. He concludes his article as follows, and we may add amen to it:—"We desire to encourage a healthy scepticism as to typhoid in an infant, especially in the absence of an epidemic, which case has not the classic symptoms and signs which would lead to a diagnosis in an adult. We would say further: Beware of typhoid without lesions and lesions without clinical history of typhoid."

Noyes, W. B.: Enteric Fever in Infancy. (*Journal of American Medical Association*, 1895, Vol. xxv., No. 13.)—After the enumeration of eight English epidemics of typhoid fever, eight Continental epidemics and six epidemics in America, the author concludes that it is proved that during epidemics typhoid fever is not uncommon in childhood, and that in the first five years of life it occurs in regular proportion of cases quite as frequently as one would expect from the special care which infants receive. We have been free to a certain extent from these epidemic cases in America. After a review of the pathology of typhoid, the symptoms are considered in detail. As the author covers the period of childhood, it is doubtful to what extent his remarks apply to the disease as it appears under two years. He concludes that the disease seems to appear in three forms: an abortive type of short duration, a type resembling ordinary typhoid fever but lasting about three weeks, and a malignant or prolonged type. The convalescence in children is, as a rule, quicker and less complicated than in adults.

Report on Diphtheria Antitoxin.—The Metropolitan Asylums Board of London has just issued a report of the results following the use of antitoxin in the treatment of diphtheria at the hospitals under the authority of the board. The results were obtained during the year

1895 in six hospitals in which cases of diphtheria were treated. The total number of cases treated with antitoxin was 2,182, in 615 of which the patients died, representing a mortality of 28.1 per cent. The drug was not used in all the cases which came under treatment, but, generally speaking, only in the severer instances. The death rate from diphtheria in 1894 was 29.6, while in 1895 it was 22.5, a reduction of 7.1 per cent. In the laryngeal cases during 1894 the mortality was 62.0, while in 1895 it was reduced to 41.8. In the tracheotomy cases it was 70.4 during 1894, but in 1895 the death rate fell to 49.3. Thus, the improvement in the mortality rate was as much as 20.2 per cent. in the laryngeal cases and 21.2 per cent. in the tracheotomy cases. The clinical results of treatment by antitoxin, noted in the report, were: Diminution of faucial swelling and of the consequent distress; lessening or entire cessation of the irritating and offensive discharge from the nose; limitation of the extension of membrane; earlier separation of the exudation; limitation and earlier separation of membrane in laryngeal cases; improvement in general condition and aspect of patients; prolongation of life, in cases which terminate fatally, to an extent not obtained with former methods of treatment. The report concludes with the following summary of the improved results in the diphtheria cases treated during the year 1895: A great reduction in the mortality of cases brought under treatment on the first and second day of illness; the lowering of the combined general mortality to a point below that of any former year; the still more remarkable reduction in the mortality of the laryngeal cases; the uniform improvement in the results of tracheotomy at each separate hospital; the beneficial effect produced on the clinical course of the disease.—*Paediatrics.*

Diphtheria Antitoxin in Japan.—There were 353 cases of diphtheria treated by serum injections in Tokio during the year ending November 25, 1895. Of this number 31, or 8.78 per cent., died. In the statistics collected by Kitasato of 26,521 cases of diphtheria in Japan, treated before the introduction of serotherapy, the number of deaths was 14,996, a mortality of 56.54 per cent.—*Med. Rec.*, 1896, xlix. 401

The use of antitoxin in the treatment of diphtheria has not become so general in this country as our personal experience with it would amply justify. The conservatism which is so creditable to the profession and so necessary an admixture in the physician's mental make-up, especially in these days when the manufacturer of new remedies is so relentless in his pursuit of us, would be a mistake in our opinion, in this particular instance.

A recent accident in Germany, in which the son of Dr. Langerhans, of Berlin, *aet* 21 months, "died suddenly while in perfect health in consequence of an injection of diphtheria antitoxin," has been widely discussed in the lay press.

Dr. C. B. Fitgzerald, in *Med. Rec.*, 1896, xlix, 572, has practically proved, on information secured from Dr. Langerhans himself, that the

child was poisoned by the carbolic acid used as preservative of the antitoxin employed, as "he had received abont four-fifths of a grain, about five times the safe dose, and inasmuch as the minimum fatal dose is unknown, perhaps a fatal dose."

The only unpleasant result we have seen is that in every other case, about a week after administration, an annoying urticaria appears. The article we have used so far is Gibier's, of New York, obtained from the Provincial Board of Health. While judgment should be shown in selection of cases for its employment, and those that promise to be slight may be safely treated without it, still we would not personally feel justified in neglecting it in any case at all severe, bearing in mind that no other measure found valuable before can be neglected now; that it must be used within the first forty-eight hours if at all, and that it must be used freely, two drachms for any patient above eight or ten years, and another drachm in twelve hours or so after.

A Case of Intra-uterine Infection with Relapsing Fever.—A. Mamuroffski (*Meditsinskoye Obozrenie, No 20.* 1895) relates the case of a woman, four months pregnant, who aborted during an attack of relapsing fever. In dry preparations made from the blood of the vena cava and right ventricle of the fœtus, Obermeier's spirochætæ were found in great numbers. The author believes from this that micro-organisms may readily find their way from the capillaries of the uterine mucous membrane into the placental circulation.

This is an extremely interesting observation, both as bearing on antenatal disease and its possible effect on the whole future of the coming child, and as a contribution to the pathology of such inherited diseases as syphilis.—[Ed.]

Epilepsy.—The following formula was recommended by Brown-Séquard as a remedy for epilepsy:

Sodium bromide	gr. 180
Potassium bromide	gr. 180
Ammonium bromide	gr. 180
Potassium iodide	gr. 90
Ammonium iodide	gr. 90
Ammonium carbonate	gr. 60
Tincture of calumba	℥ 1½
Water, sufficient to make	℥ 8

Mix. Adult dose, 1½ teaspoonful before each meal, and 3 teaspoonfuls at bedtime.—*Practitioner*, 1896, *lvi*, 448.—*Paediatrics*

Itching, which is so often found in connection with eczematous conditions of the anal and genital regions, can be greatly relieved, according to Dr. Cantrell, by the use of an ichthyol wash ranging in strength from 1 to 2 drams to the ounce of water.—*Phila. Polyclinic*, 1896, *v*, 136.—*Paediatrics.*

RINGWORM LOTION.—

Aromatic sulphuric acid,
Spirit nitrous ether,
Creosote, of each equal parts.
M. Apply once a day with a feather until well.

—*Bull. Pharm.*, 1896, *x*, 134.

PEDICULI.—Oil of sassafras will destroy pediculi and their ova.—*Med. Rec.*

A CASE OF POISONING FROM THE EXTERNAL USE OF ACETANILID.—Richard C. Newton (*Med. Rec.*, 1896, *xlix*, 333) reports the case of a female, aged four years, who was poisoned by the external use of acetanilid on a granulating surface on the arm, following an extensive burn.

The main symptoms were a weak and rapid pulse, cyanosis, collapse, with the patient lying perfectly motionless and helpless on her back, eyes glazed and staring, with widely dilated pupils, and cold clammy extremities.—*Paediatrics.*

SUPERSTITIONS ABOUT BABIES.—The Manx people believe that it will dwarf or wizen a baby if any one steps over it or walks around it.

In some parts of England people bind up the infant's right hand that it may have riches when grown.

In Yorkshire, England, a new-born babe is placed in a maiden's arms before being touched by any one else, in order to insure good luck.

In South America, a book, a piece of money, and a bottle of liquor are placed before the infant the day it is one year old, to ascertain its bent in life.

A baby is considered lucky in Scotland if it handles its spoon with its left hand, and it will be perfectly happy and successful if it has a number of falls befors its first birthday.

In the north of England, when a child is taken from a house for the first time, it is given an egg, some salt, and a small loaf of bread, and occasionally a piece of money to insure it against coming to want.

In Germany it is considered necessary that a child should "go up" before it goes down in the world, so it is carried upstairs as soon as born. In case there is no upstairs, the nurse mounts a table or chair with the infant.—*Annals Hygiene, 1896, xi, 257.—Paediatrics.*

A TEST FOR ALBUMIN IN THE URINE.—Alex. C. Ewing recommends the following simple way of applying an old test. It is this: Draw up into a small glass pipette or tube about an inch of the urine, let the finger remain tightly over the top and insert the pipette into nitric acid and draw up under the urine about the same quantity of acid, when if even a trace of true albumin be present there will appear a beautiful line of demarcation between the acid and urine. This test is as accurate as it is

simple, and, besides, is decidedly economical and far less trouble than all others.—*Med. Rec., 1896, xlix, 337.*

Rey.—(*Gazz-degli Osped., Paediatrics.*) Recommends trephining through the rib in empyaema, instead of resection. He makes a longitudinal incision over the eighth or ninth rib, raises the periosteum, trephines through the rib with a trephine large enough to admit a fair-sized drainage tube, and claims that while the method allows adequate means of intrapleural antisepsis and drainage it has the advantage of preserving the integrity of the chest wall and thus favoring the re-establishment of respiration on the affected side. It would not appear to be of service in a case in which the lung is so permanently compressed as to be incapable of return to the chest wall.

Headquarters Michigan Military Academy,
Orchard Lake, Mich., June 2, 1896.

Messrs. F. Stearns & Co., Detroit, Mich.:

Gentlemen,—I have the honor to report for your information some observations in regard to the effect of the Kola nut and the liquid preparation (Kola-Stearns) furnished by you for a forced march by a company of cadets from the Michigan Military Academy at Orchard Lake, Mich., to Detroit, Mich., on Saturday, May 23, 1896.

A company of forty-one cadets from the Academy left Orchard Lake at 4.52 a.m., and reached the Russell House, Detroit, at 12.05 p.m., being seven hours and thirteen minutes, marching the entire distance of twenty-eight miles, including rests and twenty-five minutes for lunch.

The actual marching time was six hours and twenty minutes, and the distance, as twice measured by a cyclometer, is 28.07 miles, or at the rate of 4.53 miles per hour while marching—a very remarkable record.

Before starting I gave to one-half of the company the Kola nut; to the other half the liquid preparation (Kola-Stearns.) I am convinced that the effect of the nut and your liquid preparation is to stimulate the muscles and permit of sustained exertion, while it allays thirst and hunger. The company felt comparatively well after the trip, with the exception of some stiffness and sore feet; but they soon recuperated, and no protracted effects of the long march were noticeable.

This was my first experience with the Kola, and while I could not observe its effects on individuals as closely as I desired, I am of the opinion that it will find favor with those undergoing great physical exertion.

Yours truly,
Fred. A. Smith,
Captain 12th Infantry,
Commandant of Cadets.

The Canada Lancet

A Monthly Journal of Medical and Surgical Science, Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* Dr, J. L. Davison, 12 Charles St., Toronto.

☞ *Advertisements inserted on the most liberal terms. All Cheques, Express and P.O. Orders to be made payable to* Dr, G. P. Sylvester, Business Manager, 585 Church St,, Toronto.

AGENTS :—Eastern Agents, Monohan & Fairchild, 24 Park Place, New York ; J. & A. McMillan, St. John, N.B.; Canadian Advertising Agency, 60 Watling St., London ; 5 Rue de la Bourse, Paris.

The Largest Circulation of any Medical Journal in the Dominion.

Editorial.

THE CANADIAN MEDICAL ASSOCIATION.

The Canadian Medical Association will meet in St. George's Sunday School Room, No. 15 Stanley Street, Montreal, on August 26th, 27th, and 28th next.

The local committee are putting forth every effort to make the meeting a success. There will be "clinics" at 12.30 each day at the various Hospitals, General, Hotel Dieu, and Royal Victoria. The "clinics" will be followed by the reading of papers in the theatre of the Hospitals, and in order that time may be saved, light lunches will be served.

On two afternoons, Wednesday and Thursday, there will be short excursions, and on Thursday, August 27th, at 7.45 p.m., the Association dinner will be held.

Special arrangements have been made with the Street Car Company, so that no time will be lost in going to the Hospitals from the place of meeting.

This promises to be the largest meet of the Association ever held.

The Inter-Provincial Registration Committee, about which so much interest centres, is booked to meet on August 26th, at 10 a.m.

The regular Sessions of the Association commence at 12.30 p.m.

PAPERS FOR THE CANADIAN MEDICAL ASSOCIATION.

President's address, Jas. Thorburn, Toronto ; address in bacteriology, J. G. Adami, Montreal ; address in medicine, Geo. Wilkins, Montreal ; address in surgery, John Stewart, Halifax ; addresses in midwifery, J. F. W. Ross, Toronto, J. D. Thorburn, Toronto ; hemorrhagic pancreatitis, A. McPhedran, Toronto, Wm. Osler, Baltimore ; 100 cases of retroversion of the uterus, treated by ventro-fixation and Alexander's operation, with results, A. Lepthorn Smith, Montreal ; the influence of mitral lesions on pulmonary tuberculosis, J. E. Graham, Toronto ; a note on amputation at the hip joint in tubercular disease, A. Primrose, Toronto ; tetany follow-

ing scarlatina, J. B. McConnell, Montreal; the foot, its architecture and clothing, B. E. McKenzie, Toronto, H. S. Birkett, Montreal; ophthalmia neonatorum, R. Ferguson, London; observations on the relation between leuchæmia and pseudo-leuchæmia, C. F. Martin and G. H. Matthewson, Montreal; etiology and treatment of aone vulgaris, A. R. Robinson, New York; thyriodectomy, D. Marcil, St. Eustace, Que.; some observations on the heredity of carcinoma, T. T. S. Harrison, Selkirk: some applications of entomology in legal medicine, Wyatt Johnston and Geo. Villeneuve, Montreal; physiological demonstrations of interest to medical men, Wesley Mills, Montreal; the theory of the eliminative treatment of typhoid fever, W. B. Thistle, Toronto; oral surgery, C. Lenox Curtis, New York, H. N. Vineberg, New York; clergymen's sore throat (?), J. Price Brown, Toronto.

Fare and a third rates by rail and boat have been secured.

For further particulars see Provisional Programme, or address F. N. S. Starr, 471 College Street, Toronto.

THE BICYCLE FOR WOMEN.

It may seem a work of supererogation to speak of the good or evil influence exerted upon women by riding the bicycle. For whether it works for good or evil, the sex has come out strong for the wheel; and the crusade would need to be strong, indeed, and preached by many tongues and eloquent, which would cause her to abandon what has been the greatest boon conferred upon her sex in modern times.

At the same time, not a few women are riding with—not what we could call a guilty conscience—but with a sort of half-dread that they are doing themselves injury "internally." The bugbear of modern, civilized women is undoubtedly "internal trouble," and let any thoughtful conscientious woman have it once whispered in her ear by some old woman, male, medical or otherwise, that the wheel is productive of such troubles, and she will ride with a certain consciousness of wrong-doing, such as we can remember feeling when we appropriated a pie from the pantry and shared it in chunks with the neighbor boy—we enjoyed the pie, but there was an *arriève gont* which was not pleasant. Now, if a woman ride, and fear that she is injuring her health by so doing, she will not get the same amount of good from the exercise that she would if left to the full abandonment of the glories of sunshine, fresh air, new scenes, companionship and exercise combined.

Should women or girls ride at all? This question has been argued pro and con for some years, and has been studied by medical men and others. While there has been much nonsensical theriozing, such as that "it may cause enlargement and hardening of the muscles lying on the pelvic inlet, and thus by diminishing the size of the canal cause subsequent parturition to be more difficult." The concensus of opinion of physicians and surgeons is that the exercise of wheeling, properly regulated, and indulged in at proper times, is of great benefit to all sound women and girls.

To this opinion there is hardly an exception, and we may even go further, and say that the wheel is a curative agent, superior to tonics, cod liver oil, wine, massage or change of scene, in many cases of anaemia, neurasthenia, constipation, atonic dyspepsia, general flabbiness and weakness, and amevorrhœa. Certain conditions of organic unsoundness are also improved by the general raising of tone induced by properly regulated cycling.

We would say a word about the proper adjustment of the machine. We have seen many women, and men, too, for that matter, struggling with wheels, in the most ludicrous, cramped and disadvantageous positions. Few men even are sufficiently handy to properly adjust a machine; but a woman, who "can't hit the side of a barn with a stone," is often left to struggle along, encumbered by a senseless dress, and at great mechanical disadvantage, because the dealer has not taken the pains to see that she is fitted, and her husband or brother does not himself know how to make her comfortable.

The question of excitation of the sexual feelings has been brought forward. No doubt, with improperly adjusted seats, a certain amount of pressure or friction may take place upon sensitive parts, and ill consequences to those who ride in such fashion as to induce it. But, as has been said by a physician in speaking of the subject, "if such cases occur it is the woman and not the bicycle which is at fault, and that those who wish to indulge in such practices will not take the trouble to cycle to obtain their gratification." If a woman sit, as she should sit, squarely upon the tuberosities, there is practically no pressure upon the perineum and the genitalia, and there is no more danger of mastorbation taking place on the wheel than when walking.

The desire to excel, largely developed in most women, leads them often to untax their powers in cycling. They should, therefore, be cautioned by their physicians to take the exercise under well certain defined conditions. She should keep well within the fatigue limit, especially when learning, and gradually increase the distance travelled as she becomes hardened as to her muscles, and under less nervous strain as she obtains greater command of her wheel. She should not ride during menstruation, nor during the period of pregnancy, except the first three months, nor for at least three months after confinement. In common with men, she should not ride at all if she has bad valvacor disease of the heart. Also let her know that scorching or climbing hills is positively not for her, as indeed they should not be for any one except the professional athlete who takes the chances of heart strain, knowing what he is about. With these limitations, we have no hesitation in saying that cycling is a boon and a blessing to all women who indulge in it.

THE COCAINE HABIT.

Since the introduction of cocaine about a decade ago, its victims have been numerous, and the list is being increased daily.

The stress of our age, the race for the dollar, for professional or political destruction; the keen competition in all walks of life, but especially

in cities and towns; the over production of professional and business men, to the detriment of those walks of life in which man is a producer, and lives nearer to nature; all go to force the over wrought nervous system to fly for solace to some sweet nepenthe. The desire for some sorrow-forgetting potion seems to come in early in the evolution of the human race; the earlier in the process the cruder the drug. But few aboriginal races have been known who had not some means at their disposal of producing intoxication or narcosis.

In our own day, while the laitly deplore the evil effects of alcohol, and while it still continues to be the intoxicant of the masses, a far more deadly and insidious agent is found in opium, or some of its derivations. But the most potent for evil, the quickest in sending its most unhappy victim downward, is cocaine.

Unhappily it is almost entirely in our own profession that the habit has taken root. It is so easily and apparently so innocently acquired, that no wonder many men, of the richest mental endowment, and highest professional training, fall victims to its fatal charms.

A coryza treated by a 4 per cent. solution thown into the nostrils with an atomizer has been the first step in the downward path. An aching tooth with a few crystals of cocaine pricked into the gum with an ordinary tooth-pick, in another instance was the starting point. Again, many persons who have been addicted to alcohol, or morphia, not having the desired drug at hand have used cocaine as a substitute for once or twice, and so started the habit. Its action is so prompt to brighten the intellect, take away the sense of fatigue, relieve hunger and thirst that it is no wonder the over wrought physician, having once, either by accident or design, tasted its joys, is so liable to return to it when the necessity is felt. From description given by medical men who have been or are victims, we should not think the sensations are as pleasant as those produced by either alcohol or morphia. But of course each series or set of sensations will depend upon the individual temperament of the user. The following graphic description is by a surgeon who has gone through the whole gamut, having taken as high as one hundred and twenty grains of the drug daily, with a largest single dose of twenty grains.

"The first feeling a cocainist has is an indescribable excitement to do something great, to leave a mark. But, alas, this disappears as rapidly as it came, and soon every part of the body seems to cry out for a new syringe. The second sensation—at first, at least, no hallucination—is that his hearing is enormously increased, so that he really (?) hears the flies walking over the paper. Very soon every sound begins to be a remark about himself, mostly of a nasty kind, and he begins to carry on a solitary life, his only companion his beloved syringe. Every passer-by seems to talk about him. Often and often have I stopped persons, or ordered the police to arrest them, thinking they were talking about me. After a relatively short time begins the "hunting of the cocaine bug." You imagine that in your skin worms or similar things are moving along. If you touch them with wool (especially absorbent wool) they run away and disappear, only to peep cautiously out of some corner to see if there is any danger. These worms are projected only on to the cocainist's own

person or clothing. He seems them on his washing, in his skin, creeping along his penholder, but not on other people or things, and not on clothes brought clean from the laundry."

The physiological effects of the drug are summarized by him as follows.

The cocainist early loses all appetite for solid food, but likes sweets, lollies and cakes. Diarrhœa is soon produced, and immediate evacuation often follows big injections. Upon the muscular system the drug, as is generally recognized, acts as a most powerful stimulant for either single or continued effort. It increases also the number of the respiratory and of the cardiac contractions (with vascular dilatation,) as well as the quantity of urine (with large or repeated small doses, incontinence follows,) and, enormously, the amount of sweat. Hence the great loss of weight. It stimulates also sexual appetite, though, later on, power is lost whilst desire remains. After each injection the pupil dilates, but remains dilated only because injections are continued. As regards the brain, mental processes seem quickened, but a kind of hypnosis intervenes, so that the brain works without, and even against the will. Immediately after the injection the cocainist becomes excited, and remains restless whilst under the influence. He likes manual work, however trifling, but has neither will nor ability for mental work, because he is bound to inject every five or ten minutes, or, in fact, because he never ceases to inject. The hallucinations and illusions already mentioned make their appearance early. One syringe self-injected is, in my opinion, absolutely sure to produce the fascinating desire for a second. The individual is almost certainly then a cocainist, and will procure the drug for self-administration, even when apparently it is impossible to do so. All watching is useless. He has thousands of excuses to get a moment to himself, generally in the neighborhood of some chemist. Unscrupulous—even though still aware to some extent of his ties—he will get it, dishonestly if necessary; and even when not craving for it at the moment, he will get it, because his only idea is to have it with him. The sense of right and wrong is not abolished, but he does not care much about trifles. Thus he sinks lower and lower, disregards his personal appearance, and, because they will always show, or sham to show, a certain respect to his higher education, he seeks the association of lower people. He thus becomes a scoundrel or criminal, and does not mind to do so so long as he gets his cocaine. It is extremely seldom that he makes a trial to free himself of the habit, mainly because he does not see any reason to do so. Suicide he never contemplates so long as he can get his beloved drug.

THE MEDICAL SERVICE.

Relative rank has been abolished in the militia, and surgeons will in future hold substantive rank.—*Can. Mil. Gaz.* They will be known as surgeon-lieutenant, surgeon-captain, surgeon-major, and surgeon-lieutenant-colonel. To Deputy Surgeon-Gen. Ryerson the thanks of the medical officers of the militia are due. For years he has been fighting for this change, and he has been continually "sat upon" by those in

authority. One major-general told him in the presence of the staff at one of the district camps that medical men were becoming a nuisance, for they wanted too many things. The feeling among the militia generally is that we cannot do too much for the medical staff. In case of active service an effective medical organization can do a great deal for the comfort of the officers and men. They are just as ready to expose themselves to danger as the combatant officers. Sir Fred. Middleton especially complimented Dr. Ryerson, who was then in the Grenadiers, for his daring in exposing himself to the enemy's fire in the discharge of his duties at Batoche.

Dr. Ryerson is at present abroad, and he will, no doubt, be delighted that his long agitation has been successful. It is to be hoped, however, that he will continue the agitation for further reforms. Better equipment must be made available. The Government should do more to encourage training in military ambulance work.

THE MORTALITY FROM EMPYEMA IN CHILDHOOD.

Marshall *(Lancet)* writes of the publication of the interesting statistics by Wightman, which induced him to collect the cases of empyema which have been under his care since 1879. All the author's cases have been treated by free incisions, with the exception of two, where, owing to the grave condition of the child and extent of the effusion, it was deemed wisest to relieve the chest of limited aspirations some hours before proceeding to free incisions. This he believes to be a very useful precaution. The total number of cases operated upon by him were forty-five, the deaths being seven. In his list seven cases were under three years of age, and of these two died, one child being one year old and the second one year and nine months.

The method of treatment in every case may be briefly summarized as follows: Free incision, a single tube in infants, but a double-barreled tube in all above the third year; the complete emptying of the chest for the first week twice daily by turning the child upon its side; the early removal of the tube at the end of the first week, and allowing the patient to sit up and move about as early as possible after the first week, thus helping the expansion of the lung.

In connection with the deaths, the following facts are distinctly noteworthy:

1. That, with one exception, all the fatal cases were those of effusion on the left side.

2. In all there was a long history of illness before admission; varying from six weeks to three months.

3. In one, gangrene of the lung was thought to exist, but this could not be demonstrated post-mortem.

4. Of the two deaths occurring in children under two years of age, one was the direct sequence of chicken-pox, and, in both, the children were rachitic to a degree.

CALOMEL IN HEART DISEASE.

Dr. Maldaresca, *British Medical Journal*, describes the successful results he has obtained with calomel in heart troubles accompanied by distress in breathing, severe disturbances in the circulation, ascites, edema, albuminuria and hypertrophied heart and liver. He gives it in six powders with sugar, 0.10 gram every two hours during the day, for two or three days, following this with 0.10 to 0.10 gram a day for a few days after, when he then commences potassium iodid. Enormous ascites and edemas vanish with this treatment, and even patients in complete cyanosis are restored to comparative health. He ascribes the wonderful action of the calomel to its effect on the liver. It relieves the congestion and thus restores the circulation in the important portal and liver veins which exert a favorable influence on the entire circulation and cures some of the complications, while it relieves all. The gums are frequently affected by the calomel, and he orders a mouth wash from the first, consisting of potassium chlorate 10.0, tannin 0.25, aq. dist. 350. He limits his patients to a milk diet during the treatment, and warns them afterward to refrain from alcohol and excessive exertion, and restrict themselves to a light diet, and persist in the use of potassium iodid. He has treated 107 cases, with five deaths of those that were *in ultimis*, and nine other deaths, all of elderly persons in advanced stages. He notes that the calomel has also the advantage that after it other remedies produce their best effect. He scouts the idea that calomel can form sublimate in the alimentary canal, as a very elevated temperature is required for this.

THE VALUE OF ANTIPYRETICS.—M. Binz, of Bonn, (*La Presse médicale de Belge*) discusses under this head quinine, salicylic acid, antipyrin, antifebrin, thallin, and ethyl alcohol. Quinine acts by a direct depression of cellular activity, and not through its influence on the nervous system. This depressing action is manifested on the pathogenic cells of malarial fever as well as on the normal cells of the organism. The antipyretic action of the drug is, therefore, both local and general. Salicylic acid has properties analogous to those of quinine. It has an energetie antifermentative and antiputrefying action; it is not toxic; it is not destroyed in the human organism. The feeble chemical activity of its sodium salt is not an obstacle to its action in the organism, because the active acid is set free by the carbonic acid of the inflamed tissues. It differs from quinine, however, in having a different action upon the cells of the organism, an action which is analogous to that of the members of the following group. The antipyretic action of antipyrin is obtained by its influence on the central nervous system,—that is, upon the head-regulating centres situated in the brain. The characteristic of its antipyretic action is to weaken actual nervous excitation produced by the agent which caused the fever. Antifebrin, phenacetin, and thallin act in a more or less analogous manner. Thallin, however, must be credited with a direct destructive action on the organisms in the infective fevers.

Alcohol has an appreciable action in lowering the temperature, particularly in the putrid or septic fevers. The causes of this action are many. The nervous system and the circulation are influenced. The excitation of the heart should also be considered, inasmuch as the circulation in the skin is increased and the heat dissipation is accelerated. Again, large doses of alcohol ought to act as an antiseptic agent on the organism, diminishing the vitality of bacteria. There is no post-mortem elevation of temperature in febrile animals which have been treated by large doses of alcohol. Finally, alcohol is a powerful diuretic, and thus there is an added possibility in its use of a rapid elimination of toxines which cause and keep up the fever.

Headache.—In headache, vertigo, or other symptoms of secondary cerebral congestion, due to atheromatous degeneration of vessels, Giovanni has obtained good results from

℞ Ergotin ..... gr. iss
Extr. of Calabar Bean ..... gr. ¼
Extr. of Gentian ..... q. s.
M. ft. pil. no. j.

Sig.: From one to ten pills daily, increasing the quantity according to tolerance.—*Le Progress Medical.*

A New Treatment for Uterine Hæmorrhage—Berman (*Allg. Wien. Med. Zeit.*)—Labadie-Lagrave has used a mixture of salol and antipyrine with prompt success in many cases of metrorrhagia and menorrhagia. Equal quantities of salol and antipyrine are warmed over a lamp, in a glass tube, till they are deep brown, and allowed to cool. A fine uterine probe, wound with cotton, is dipped in the liquified mixture and applied direct to the uterine cavity two or three times in succession. The application is painless, and not followed by unpleasant symptoms. A second application is rarely necessary. Labadie-Lagrave has used this treatment since 1893 for uterine hæmorrhage, and has had better success with it than any other. The use of the curette should precede the application if vegetations or fungosities are present.

Book Reviews.

A Manual of Medical Jurisprudence and Texicology, by Henry C. Chapman, M.D., Professor of Medicine and Medical Jurisprudence in the Jefferson Medical College of Philadelphia, etc., etc. Second Edition, revised, with 55 illustrations and 3 colored plates. Philadelphia, W. B. Saunders; Toronto, Carveth & Co.

The work is enlarged since the edition of 1892 by the addition of a brief bibiography, bearing upon the statements originally made in the text. There are several new figures and tables, and the work may be looked upon as fully up to date, and of great usefulness to students.

The National Formulory, a new and revised edition, being a Supplement to The National Dispensatory. Lea Brothers & Co., Philadelphia; Toronto, Carveth & Co.

This little book gives the national formulæ of unofficial preparations, and will be a valuable book of reference to the physician.

SUPPLEMENT TO "CANADA LANCET."

TRINITY ALUMNI ASSOCIATION.

The Fourth Annual Meeting of the Trinity Alumni Association was held in Convocation Hall, Trinity University, April 7th.

Vice-President Dr. T. H. Stark, occupied the chair.

The report of the secretary, Dr. Elias Clouse, showed the Society to be in a flourishing condition. The report recommended, among other things, the establishing of an annual alumni prize to the member presenting the most meritorious essay on some subject in medicine.

The following officers were elected for the coming year :—

President, Dr. J. C. Mitchell, Enniskillen; Vice-Presidents—Western Ontario, Dr. J. W. S. McCullough, Alliston; Eastern Ontario, Dr. Douglas, Cobourg; Toronto, Dr. Allan Baines; Quebec, Dr. Astley, Quion; New Brunswick, Dr. Wade, St. Andrews; Nova Scotia, Dr. Fraser, Halifax; Prince Edward Island, Dr. C. A. McPhail, Summerside; Manitoba, Dr. W. A. Thompson, Douglas; British Columbia, Dr. E. A. Hall, Victoria; United States, Dr. Williams, Saginaw; Treasurer, Dr. Pepler, Toronto; Secretary, Dr. Elias Clouse, Toronto; Assistant Secretary, Dr. J. G. Wishart, Toronto; Graduates' representative, Dr. F. H. Stark; Faculty representative, Dr. D. J. Fotheringham; Auditor, Dr. H. B. Anderson.

Dr. N. A. Powell and Dr. J. MacMaster gave a demonstration of shadowgraphy by the "X" rays of Röentgen.

Dr. N. A. Powell outlined the *modus operandi* of the production of the pictures, pointing out the special apparatus needed. He presented shadowgraphs of screws and nails which had been driven into pieces of wood, a Murphy button, a calculus from the bladder, a pair of intestinal clamps, two bullets 45 calibre, and two coins, which they had to borrow. The exposure was made under a bell jar, and lasted two minutes.

He then referred to the surgical conditions in which the rays might be useful as a means of diagnosis.

Dr. J. MacMaster said that the storage cells used produced a current of 14¾ volts which transmitted to the secondary coil gave a current of from 12 to 200 thousand volts. The interruptions numbered from 400 to 450 per minute. The Crooke's tube, he explained, was a glass bulb from which the air had been exhausted until only one-millionth of an atmosphere remained. The current passing through this tube produced the cathode rays These striking against the glass make an inflor esence. They could be deflected like ordinary light Ordinary light when passed through a prism gave various visible colors of the spectrum. But at each end there were invisible rays—the infra-red and the ultra-violet. The infra-red produced heat, while the ultra-violet were actinic. These ultra-violet rays were in certain respects like the cathode rays

Issuing from the bulb directly opposite the cathode rays come the "X" rays. Some suppose them to be produced by the collision of the cathode rays on the glass, setting up certain pulsations in the glass, or molecular vibrations of the ether between the molecules of the glass. Others suppose the action takes place outside entirely. One school believes that they are simple rays, in many respects like light rays, consisting of short vibrations of ether. Another school holds to the view that the molecules of air left in the tube becoming highly charged with electricity, become split up, owing to their bi-polar condition, the positive going to the negative pole and being repelled, and produce the rays by striking against the tube directly opposite.

Dr. Teskey then read a paper on "Some Special Cases of Appendiceal Abscess." He said he felt like apologizing for presenting a subject about which so much had been said. It seemed to him that there was nothing about it with which they were not all familiar. He reported two cases

which he thought presented sufficient special characteristics to make them worthy of attention.

The first case was that of a young man aged 21. He was taken ill for the first time with symptoms of inflammation in the abdomen. In ten or twelve days he, the essayist, was called to relieve him surgically, the medical attendant having satisfied himself that the patient was suffering from inflammation or abscess of the appendix.

The case was an extreme one, life being in great danger. The abdomen was distended, especially in the lower zone, the point of maximum expansion and resistance being about 1½ inches to the right of the middle line and close above the inguinal canal. The whole surface of the abdomen was resonant on percussion. He dare not palpate with any freedom. Suspected the case was one in which the abscess was in the pelvis; a digital examination of the rectum confirmed the suspicion. In view of the general resonance, it became a question as to where the incision should be made. Finding some slight resistance just above the anterior superior spine of the ilium, I made a small incision through the abdominal wall and found the intestine adherent to the peritoneum. The finger was passed behind in the iliac fossa, downward over the brim of the pelvis, just beyond the pulsating iliac vessel. Did not reach the abscess. He felt the danger was too great to persist further from that point. He then opened, according to the usual rule, at the point of greatest prominence beyond the inguinal canal. Found the small intestines agglutinated, forming the roof of the abscess. By carefully insinuating the finger between the abdominal and pelvic wall, and at the same time approaching the general peritoneal cavity by pressing the anterior wall back against the viscera, he found his way into a large abscess, from which ten or twelve ounces of fœtid pus escaped with great freedom. Exploring the cavity with the finger, he found that the small intestines had been completely lifted from the pelvic basin, the bladder and the rectum forming the pelvic wall. He washed out and drained, and an uneventful recovery followed, except that after 24 hours the abscess drained partly from the first opening, and the first opening was the last to close.

The second case was also a young man about the same age. It was a primary attack and had lasted seven days before the attendant made up his mind that operative procedure was necessary. The patient then was in an extreme condition seeing that a very large amount of septic absorption had taken place. He opened over the point of greatest prominence, resistance and tenderness, about two inches to the right of the umbilicus.

The whole area of the abdomen was resonant on percussion. There was no resistance in the right iliac fossa above Poupart's ligament. Here again he thought the peritoneal cavity would have to be traversed, believing the abscess was behind the colon. He opened the point of greatest prominence above the crest of the ilium, behind the anterior spine, making a short, oblique incision and he found again a free peritoneal cavity. Lifting the small intestines and the omentum, he found the colon and cæcum lifted forward by the pus. The reflection of the peritoneum from the colon to the posterior abdominal wall was protruding, and formed the abscess wall. Was opened fully. The general peritoneal cavity was protected by pressing the anterior abdominal wall against the viscera. Exploring the cavity, he found a gangrenous slough which came away and which was probably the extremity of the appendix. By careful examination, found the appendix lying close beside the cæcum and beneath the peritoneum. The patient made a good recovery.

Dr. Teskey said that he wished to refer to one or two points in connection with the cases. First, as to the delay in diagnosis. Those in the habit of meeting a great number of cases of abscess in the appendix, had very little difficulty in diagnosing the condition almost at its very commencement. But there was a large number of physicans whose attention was not fully drawn to this disease, who let preliminary symptoms pass over, the case becoming an extreme one before the surgeon was called to his assistance. As to the cause of delay in the diagnosis, in certain cases it was due to the absence of a certain feature which was spoken of as being constant in appendiceal inflammation—McBurney's point, midway between the umbilicus and the anterior superior spine of the ilium. However ready we might be to acknowledge that point as being the tender point in connection with the disease, it was not essential to inflammation of the appendix. Very frequently the tender point was not located in that vicinity but some distance from it. In one of the cases he reported, it was low down near the mid line, above the inguinal canal. The attending physician for a considerable time thought he was dealing with an inflamed bladder, there being frequency of micturition. The case was allowed to go on because too much stress had been put upon McBurney's point. In the second case there was no special tenderness in the iliac fossa nor any especial fulness nor resistance. It was two or three inches behind this. In this case the physician overlooked the nature of the disease, believing he was dealing with some kidney trouble. Another rule laid down was that the spot of greatest prominence and tenderness in the place in which the incision should be made. He said it may be found necessary to deviate from that rule in certain instances. Wherever abscess had been diagnosed in the abdominal cavity, it was wise, if possible, to relieve the condition by a sub-peritoneal operation or,

what was equivalent to that, opening into the cavity, the collection of pus having been shut in by adhesions so that the general peritoneal cavity was not invaded. In the first operation, he tried to get into the abscess cavity, through the first incision but his finger was unable to reach it. Then he operated directly over the point of greatest prominence, but that he must have been near the cavity in his first exploration was shown by the fact that it began to drain from that opening within twenty-four hours.

In the second case he varied from the rule of incising over the point of greatest tenderness, near the umbilicus, but he made an incision far back near the crest of the ilium, an oblique incision, near the lumbar region to get down to the side of the colon. He expected on account of the condition of the lower part of the abdomen, and the iliac fossa that the abcess was behind the colon where it proved to be. It was what had been called a lumbar typhlitic abscess. Opening the peritoneum in that position, he found himself in the free peritoneal cavity so that in operating he traversed the cavity. This was a dangerous proceeding but it was not necessarily fatal. The cavity was preserved in this way; there was a degree of tension in the abdomen always existing. There was a tension from within outward. If one opened into an abscess and made pressure on the upper part of the abdominal cavity, this continued to make the tension from within outwards. He thought the fresh pyogenic germs falling on the wounded surface, if immediately washed off, did little or no harm. It was when the germs had sufficient time to work beneath the surface and enter the mouths of the lymphatics that the almost irreparable damage was done to the peritoneum. He thought in this case it was unwise to hunt for the appendix or break down the adhesions. He was satisfied with irrigation and drainage. In the second case, of course, he removed the appendix, as it was easily got at.

Dr. Grasett said he thought McBurney's point should always be looked for. If in a certain case the point of greatest resistance and tenderness did not lie in that position, it would be noted somewhere else, as in the two cases reported, in the vicinity of the bladder and kidney respectively. A careful sifting of the other symptoms would help to make the diagnosis clear. The point of greatest difficulty was to know when to operate. He found himself in a very grave quandary in regard to this point.

Dr. Geo. A. Bingham said the question of when to operate was a most important one. We had three methods before us: the modern American one of removing every appendix that came within sight; secondly the conservative English one of waiting for the formation of abscess; and the intermediate one, which he thought was the proper method, first of making a diagnosis and then having the patient under constant supervision until symptoms pointed out the necessity for operation. If the symptoms indicated an increase in the inflammatory condition, or if they indicated a lowering of the condition of vitality, operation should be done at once. If a temperature of, say, 103° or 103½° for several hours with a fairly rapid pulse drops a degree or two suddenly, that was an exceedingly important symptom, and if these symptoms became grave, operation should be done at once. The tenderness of the McBurney point he believed to be due to the fact that the nerve supply was greatest at the junction of the appendix and cæcum. As this was a movable spot the point of maximum tenderness might not be found on or under that spot on the abdomen that carries the name of McBurney.

Dr. Merritt, of St. Catharines, referred to four cases he had recently seen, two of which he had operated upon. They were all different. He had found it difficult to decide just when the moment had arrived when he should operate. He had never found much difficulty in diagnosing the condition. The question of operation in places where expert help was not at hand was one of greater moment than in the large cities where consultation and operation could be secured in a very short time. In one of the cases he had not removed the appendix, for which he had been chided, but he was pleased to know in doing this he was in accord with the views of the leader of the discussion.

Dr. Carstens, of Detroit: I think the only proper place for the appendix is in a bottle of alcohol. (Laughter) It is a very difficult question to decide when to operate and when not to. I think as one's experience increases the more he will gravitate to the opinion one should operate as soon as the diagnosis is made. The many lamentable cases I have seen as a result of procrastination makes my heart ache to think of. I feel like a sinner when I think of my conservatism.

He had seen cases where the temperature and pulse were diminishing and the patient seemed to be improving; he would wait till the next day. But in 24 hours the patient was dead. He had had this experience over and over again. There was very slight danger in cutting down and taking out the appendix before it ruptured. Ordinarily there was no trouble in making the diagnosis. It was wonderful how many cases physicians would see as soon as their attention was called to it. He had been called out to a case in Michigan by a practitioner who had had seven or eight cases during the summer. Ten years ago he never had a case. The cases then died of idiopathic peritonitis; and "The Lord's will be done" was the consolation. The speaker thought there was not one case in a thousand of idiopathic peritonitis Richardson had shown that out of every one hundred

cases of peritonitis 96 were due to appendicitis. The others were due to malignant growths, perforation of gastric ulcer, etc., all suitable for laparotomy anyway. As soon as he saw a case of peritonitis he called it peritonitis, McBurney's point or no McBurney's point, tumor or no tumor. And he would not make a mistake once in twenty-five times. Out of forty-five cases he had say three deaths following operation. But if treated medically quite a large per cent. might recover from the primary attack, but many would subsequently succumb. Only last week he was called to see a case where the patient was *in articulo mortis* and was asked by the physician to operate. He asked the medical man if that was fair to ask him in when the patient was dying. Why was he not called two weeks before? Now, when all hope of saving the patient was past the old fossil wanted to shift the responsibility on the shoulders of the surgeon.

Dr. Teskey in closing the discussion said he was disposed to agree that it was wise to operate when the diagnosis was made.

AFTERNOON SESSION.

Dr. P. D. Goldsmith, of Peterborough, read a paper on "Broncho-pneumonia," which appears in this number of THE LANCET.

Dr. J. L. Davison complimented the reader on his excellent paper, particularly on his presentation of the treatment of cases of broncho-pneumonia. Much was seen in these days in our scientific books about the pathology and diagnosis of disease. Old methods of treatment where the *rationale* could not be scientifically explained, were not advocated. What Dr. Goldsmith had recommended, he had found from experience to be beneficial, and that was, after all, the test of a remedy. In regard to poulticing, he, like the essayist, considered it a most useful form of treatment in these cases. It was not fashionable nowadays. Our grandfathers found this did good, although they did not understand the question of reflexes. Dr. Davison recommended whisky instead of brandy as a stimulant, because it was a purer spirit. For the diarrhœa he found nothing better than liquor hydrarg. per-chlor. in five to ten drop doses, particularly where there were mucous and bloody discharges with tenesmus. Its action was not rapid, but it was certain. As a bronchial sedative he preferred codeine to opium. In chronic cases where resolution was slow, as a slow and steady counter-irritant, he found the best results from applications of ung. hydrarg. ox. rub.

Dr. Shaw, of Clinton, believed where poulticing was properly carried on it acted well. But in a country practice where skilled nursing could not be procured, it was difficult to get it done right.

Dr. J. H. Carstens read a paper on "The Exploratory Incision in Abdominal Surgery, Its Indications and Technique," which will appear in the June number of THE LANCET.

Dr. Temple said, in discussing the above paper, that he could not agree that it was a proper thing to do, as the essayist had in his first case—to remove the appendages for hystero-elipepsy. It was generally agreed that operation was not justifiable in such cases. He was not prepared to agree that pelvic cellulitis did not exist apart from puerperal cases and pus tubes. He had seen its existence in numbers of abdomens he had opened, he had observed the condition. He agreed that 96% of cases of peritonitis were due to disease of the appendix. He was sure many valuable lives would be saved by promptly opening the abdomen and looking for the offending appendix. Where cases remained obscure after all other means of diagnosis had failed, he agreed that an exploratory incision was justifiable. In deciding when to operate he said it was not wise to depend on the temperature. The pulse was a far better guide. He had opened the abdomen in cases of appendicitis, and found collections of pus, when the temperature was normal. His practice was to stitch up the incision *en masse* rather than by the tier method advocated by Dr. Carstens.

Dr. Hingston, discussing Dr. Carsten's paper, said he could not agree that 96 out of every 100 cases of inflammation of the peritoneum were from the appendix. He said he also took exception to the statement that an exploratory incision was justifiable to establish a diagnosis. In his experience, of thirty years, he had met with only two cases where he was unable to diagnose the condition. In these days the abdomen was entered with too much impunity. He was at variance with the essayist in saying that the physician should always call in the abdominal surgeon in these cases of appendicitis. That always meant operations. Another thing: he would not remove the ovaries where the symptoms were purely subjective. In closing the abdomen, he used the *en masse* suture. Sir William held that the prevalence of ovariotomy was having a very detrimental effect on social life.

Dr. Teskey thought there was too great a tendency to run into specialties in surgery. The man who could remove a limb and stop hæmorrhage should be able to open the abdomen. The abdominal surgeon should only be one through expediency; he should always be able to do general surgery as well. As to cellulitis, all that was necessary was an irritant in the cellular tissue or lymphatics, no matter how it got there. Mechanical injury to adjacent bone, abrasion of the vagina or the cervix, etc., allowing the entrance of the germ to the lymphatic spaces, would produce pelvic cellulitis. And that was all there was about it. In obscure cases, when other diagnostic means failed, exploratory incision

to determine the condition was allowable. It was not allowable in pelvic neuroses. As to the choice of site for the incision, the essayist had shown a preference for the linea alba and semilunares. He (the speaker) rather chose to have more liberty. In many cases he preferred to cut through the abdominal muscles. A small incision to be afterward enlarged if necessary, through the external oblique, then an incision through the internal oblique (especially in appendix cases) in a line with the aponeurotic fibres, which are intimately connected with the transversales. Practically one could not distinguish between the two. In closing up, where the abdominal wall was thick with adipose tissue the layer suture was preferable, first stitching the edges of the peritoneum with cat gut; next the two inseperable layers of the transversalis and internal oblique also with cat gut, using a mattress suture; and, most important of all, the external oblique aponeurosis with a mattress suture. This made a very strong abdominal wall, and there was little or no danger from hernia.

Dr. Carstens said it was never right to remove healthy ovaries, as in hystero-epilepsy. Ovariotomy would not cure epilepsy. He had to refuse such cases every day, but it did no good, because somebody else would do the job. Regarding the social aspect of the question, he held there were two sides. Those who held the side opposite view to Dr. Hingston argued that "this sort of woman was no good. Better to take em out, anyhow. Don't want this kind to breed, would breed epliepsy hysteria, drunkenness, insanity." However, he drew the line on disease. He did nearly two hundred abdominal sections in a year, and had yet to see a single case of pelvic cellulitis. His contention for the exploratory incision was that it should only be used as a last resort for diagosis. But he considered it a perfectly justifiable proceeding, the risk being comparatively small. There was some risk about any operation in which an anæsthetic was used. He disagreed that a general surgeon could do all sorts of surgery. He (the speaker) found his time completely taken up in this one line of work and reading the literature of the subject in three languages. As to his relation to the general practitioner the specialist could not divorce himself from him, as his own work depended entirely on the general practitioner.

Sir William Hingston then delivered the address in Surgery. He said that not being aware, till he arrived in the city, that he was to address full-fledged medical men instead of students, he was somewhat taken aback, and much that he had intended to say would not be *apropos*. He would, therefore, ask to be pardoned if he were somewhat rambling in his remarks on the progress of surgery. Much of what he had decided on saying had come out in the previous discussions, as, for example, the question of operation for diagnostic purposes, and the question, when to operate.

While literature, philosophy and general science had advanced with accelerated movements, giant strides were those of surgery. Its exponents had performed operations of dazing moment, they had become bold and reckless. They enter every cavity and every viscus of the body. And who would say we had reached the *ne plus ultra* limit yet? It was within memory that injury of the brain could not be located. Brain lesions then wrapped in mystery, are to-day appreciable and curable. As Kepler predicated the existence of another heavenly body, by its effects on others, before it had been discovered by the telescope, in like manner, lesions within the crainum, not seen before, could be located by their effect on remoter parts of the body. A catalogue of the pathological conditions of the brain and nerve centres could be fully established. In that department alone we were able to see that surgery was beginning to be a science. Hitherto it had been an art. But when we saw an affection of the wrist, ankle, shoulder or elbow, and could say precisely what part of the brain was affected, we had left the region of conjecture for that of absolute precision, as much so as Kepler, who, when he saw no planet, foretold there must be one there because it disturbed the whole, and later a powerful telescope brought the heavenly body into view. Such men as Ferrier and Horsley, had raised the art of surgery to a science, so far as brain surgery was concerned.

Sir William then spoke of other changes in other departments of surgery. As to epitheliomata of the face, there was a time when these were removed completely with the knife. For many years it had been his practice not to treat them in this way. He had kept them under control twenty-five or thirty years. There was epithelioma and epithelioma. For certain forms the knife must cut at once, otherwise life would be lost. As to cancer of the tongue, he was surprised from time to time to hear the enquiry made as to how much should be removed. Syme laid down years ago that the partial removal of the tongue was wrong in principle, and that view he (the speaker) had endorsed. This was the rule no matter how small a part of the tongue was affected. In some cases, it was difficult to tell whether the disease was malignant or syphilitic; but a few weeks of specific treatment would determine the condition. Formerly it was the custom to remove the tonsils. Experience has now shown that this was unnecessary. These organs enlarged and diminished with the hygrometric conditions of the atmosphere. He had noticed this particularly in one family. He rarely removed tonsils now.

Regarding empyæma he considered surgical interference necessary. Some favored aspirating,

others a small or large incision, others the removal of a portion of the ribs. Each was applicable to certain cases. If the effusion is purely serous aspiration was inadmissable, we were not warranted in admitting air. Where pus was present incision might be made, but, he believed, that an early excision of the rib was the very best possible practice. This had been his practice for some years. If the opening were not free, there was much danger of pæmic poisoning.

Dr. Hingston then pointed out the advance made in the differential diagnosis of pericardial effusion from cardiac hypertrophy. The former condition could now be relieved with a fair degree of safety, and give a most successful result.

The surgeon should be able to verify for himself the conditions he might be called on by thephysician to treat. The seeming immunity with which the abdominal cavity was opened has led to the performance of laparaotomics to an almost unwarranted extent. They were first performed in hospitals and then in private. It was generally supposed that better results were got in hospital practice. Such was not the case. Given a good intelligent nurse, and a good house in the country with windows all around and he would prefer to operate there, rather than in the best hospital. His most satisfactory operations had been performed miles and miles from the hospital, where he had a general practitioner who would carry out suggestions and instructions thoroughly. That little extra gut, the appendix, was receiving extraordinary attention. The surgeon should be ready at all times to operate where the operation was called for.

The question of when to operate was answered differently by different surgeons. There was no question in surgery which gave him so much uneasiness to decide. He had declined to operate on many occasions and did not regret it, except in two cases. He called to mind twenty-three cases where he felt it his duty to oppose operation, and so far as he knew to-day the patients were in the enjoyment of perfect health. It had been hinted that there was a surgical aspect to the question, but he believed that did not apply to surgeons in this northern land.

The operations on the appendages were diminishing, because the appendages were diminishing. The frequency with which these ovaries were being removed was becoming an important social question, and legislation might be required to limit the circumstances under which they shall be interfered with. In this matter the offences were not committed in the hospitals, but outside. A lady had recently informed him she had been at a small party of women where the subject of ovariotomy came up, and personal experiences were related. What was found? There was not an ovary around the table. Were these operations performed by men of eminence? No. But by the smaller men in the smaller villages. He recalled a society he attended in another country in company with one of the most accomplished living pathologists. One member produced an ovary; another produced two; a third two. The morbid anatomist picking them up, examined each carefully and found nothing pathological in any of them!

Latterly we had heard much of the supra-pubic method for the treatment of stone in the bladder. It was an admirable method where the stone was too large and too hard to be removed by the lateral method, and too hard to be seized by the lithotrite. If over or under three ounces the lateral method should be employed. The lithotrite should be used in all cases of children over five and in adult males over sixty-five up to the time at which the prostate begins to become troublesome. This should be done in every case where the stone is not too large nor too hard. The success of the operation for stone depends on the choice of operation.

Great advance had been made in the treatment of stricture. He remembers when a soft bougie was used to dilate the urethra gradually. It required from three to nine months, and then the results were unsatisfactory. The French introduced the method of forcible dilatation; then division. These were good methods, but were abused, and hence fell into disuse. Then came the method by internal urethrotomy. It appeared to him that a combination of external and internal division gave the most permanent results.

In concluding the Dr. pointed to the danger of devoting too much attention to specialism. No separate department of surgery, when isolated from its surroundings for the purpose of inquiry, could of itself become an art. Its departments were like the word or clauses of a sentence, each of value in its place, but of no value when alone. Every man before he enters any special department of surgery should spend at least five years of his life in the pursuit of general medicine and general surgery.

A hearty vote of thanks was accorded to the gentlemen who had contributed to the programme.

4

SERIAL

R
11
C3
v.28

The Canada lancet

GERSTS